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# Get Blender

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För att ta hem ett avancerat gratis 3D-program så gå till:  
blender.org  
och klicka på Download.

## Blender 2.64a

Blender 2.64a is the latest release from the Blender Foundation. To download it, please select your platform and location. **Blender is Free & Open Source Software.**

Blender 2.64a was released on October 10th 2012

### Windows 32 bits

Support BL  
DVDs or B

Don





platform and location. **Blender is Free & Open Source Software.**

Blender 2.64a was released on October 10th 2012

## Windows 32 bits



**[Blender 2.64a Installer \(31 MB\)](#)**

Requires Windows XP/Vista/7

USA | Germany | NL 1 | NL 2



**[Blender 2.64a Zip Archive \(43 MB\)](#)**

Requires Windows XP/Vista/7

USA | Germany | NL 1 | NL 2

Blender 2.64a 7z Archive (29 MB)

USA | Germany | NL 1 | NL 2

Blender finns för Windows både som 32-bitars och 64-bitars program. Välj det som passar din dator. För att installera programmet så klicka på Installer.

## Windows 64 bits



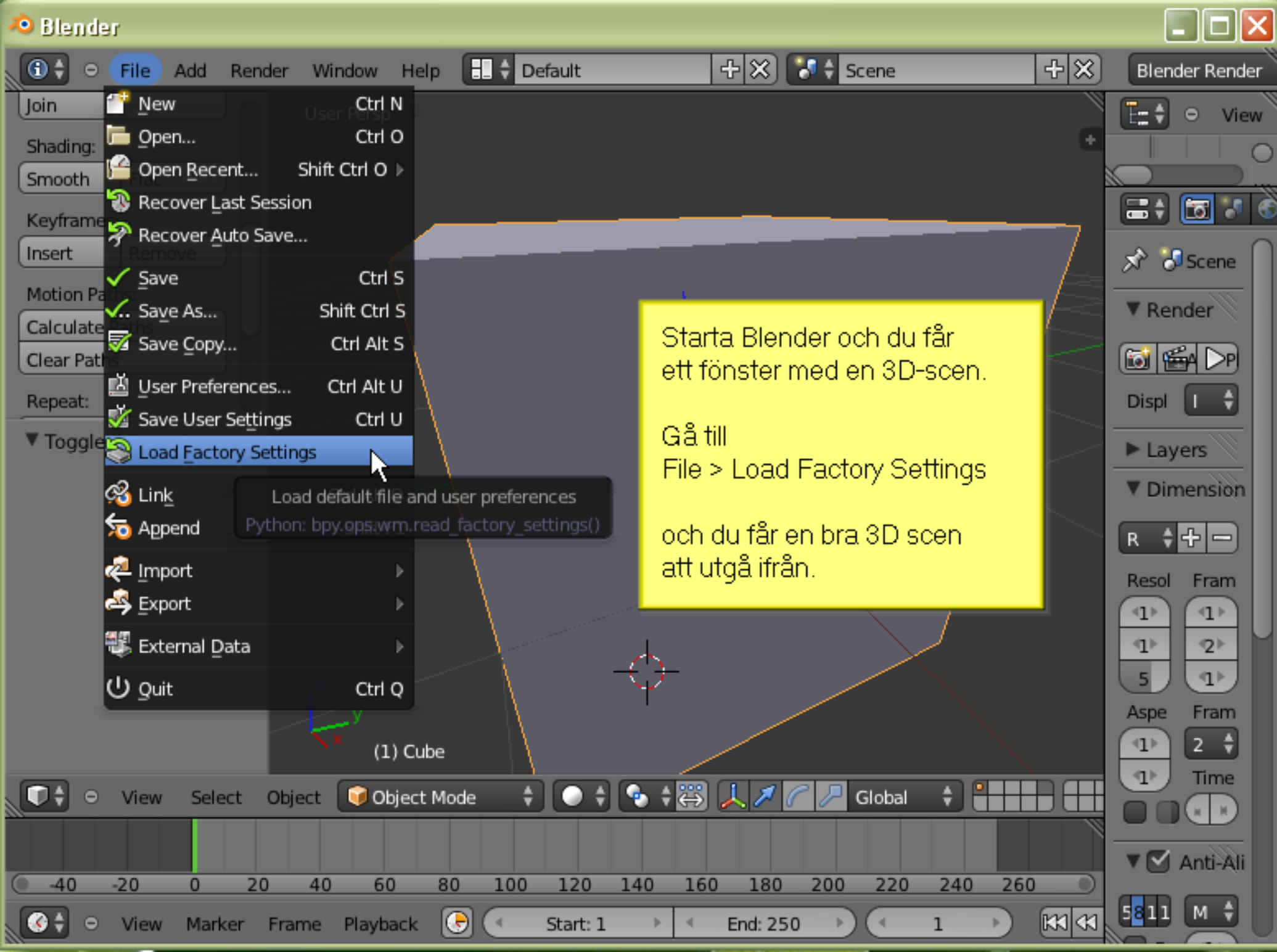
**[Blender 2.64a Installer \(36 MB\)](#)**

Requires Windows XP/Vista/7 64bit

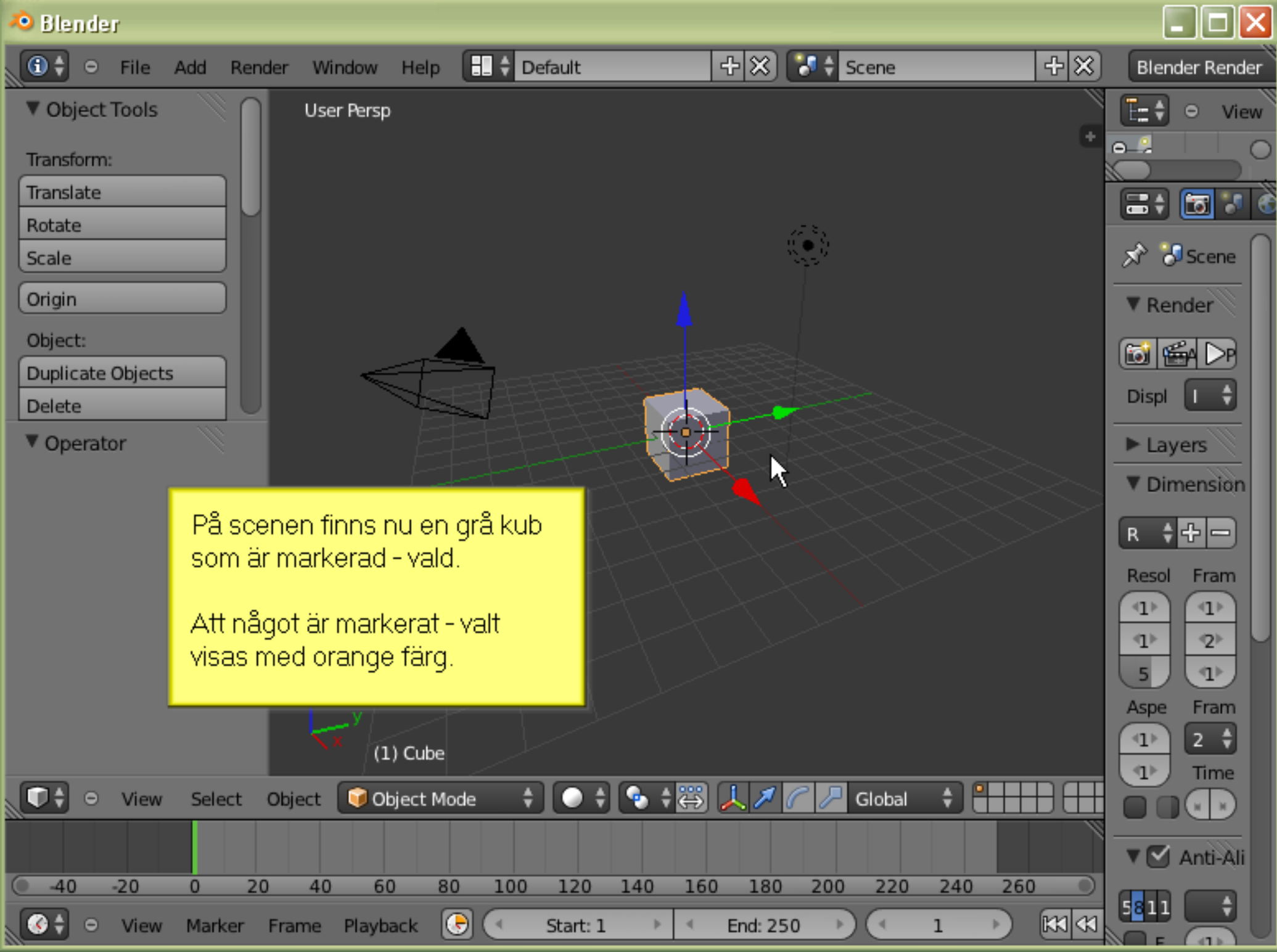


**[Blender 2.64a Zip Archive \(51 MB\)](#)**

Requires Windows XP/Vista/7 64bit

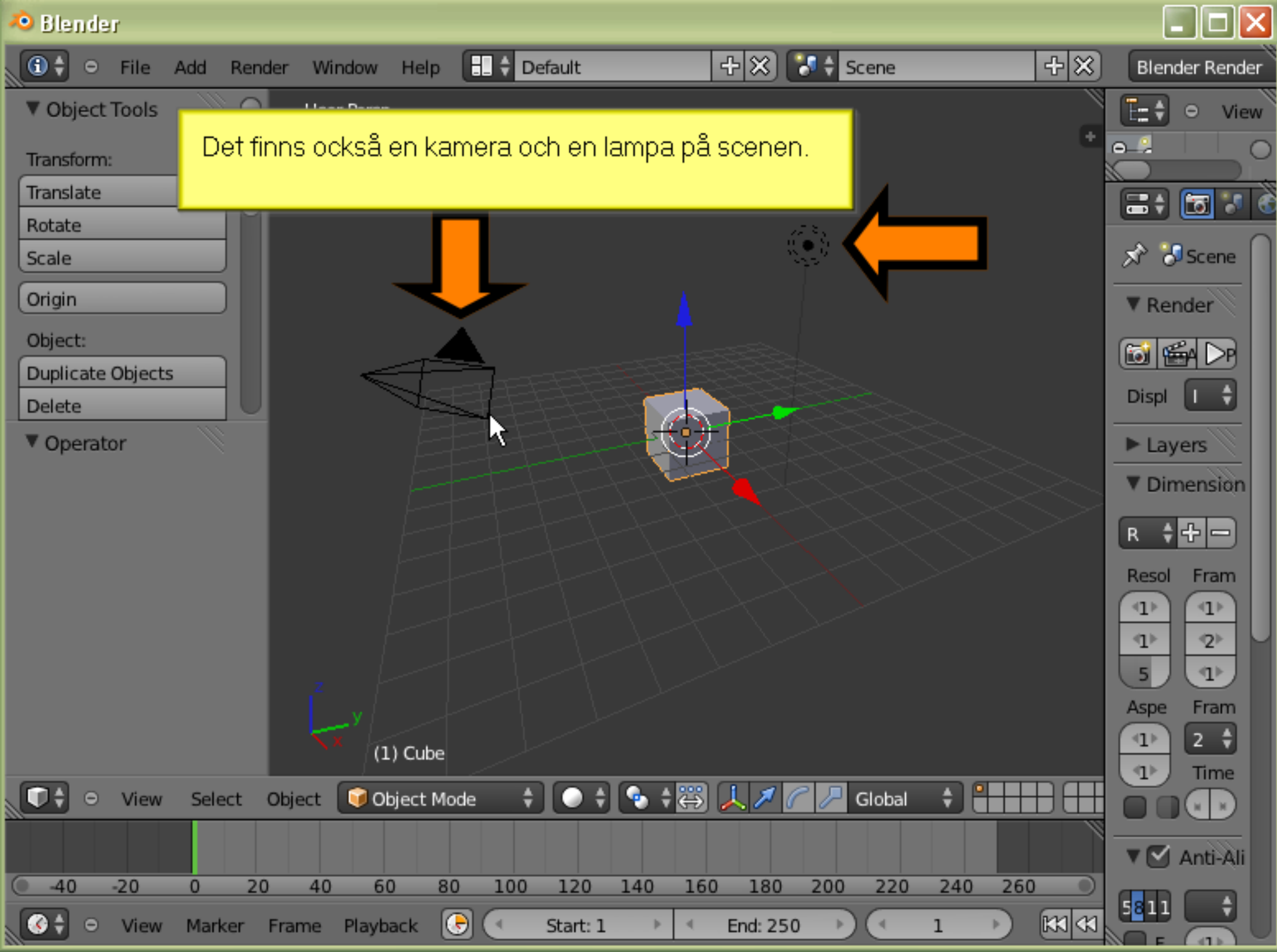


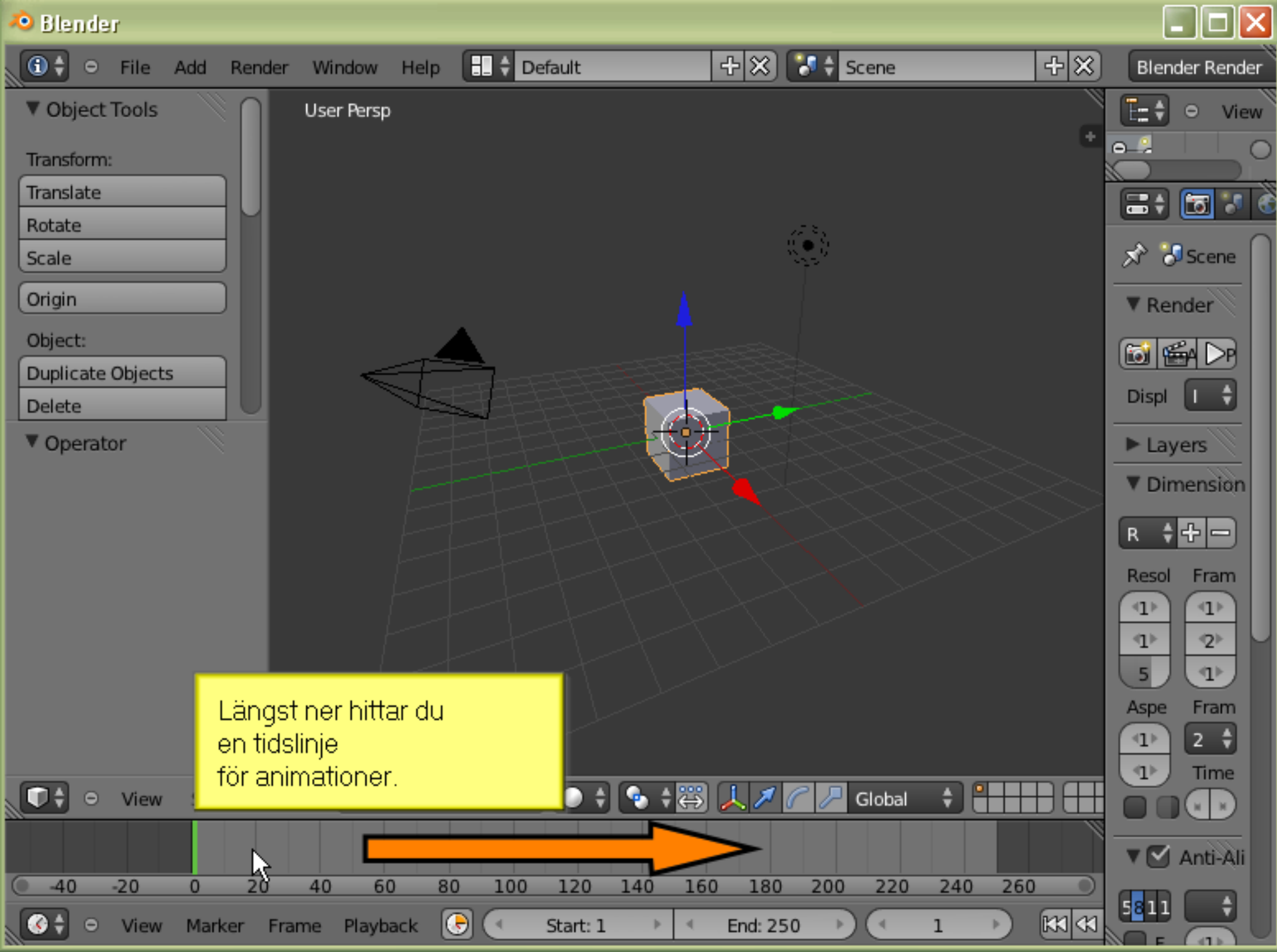


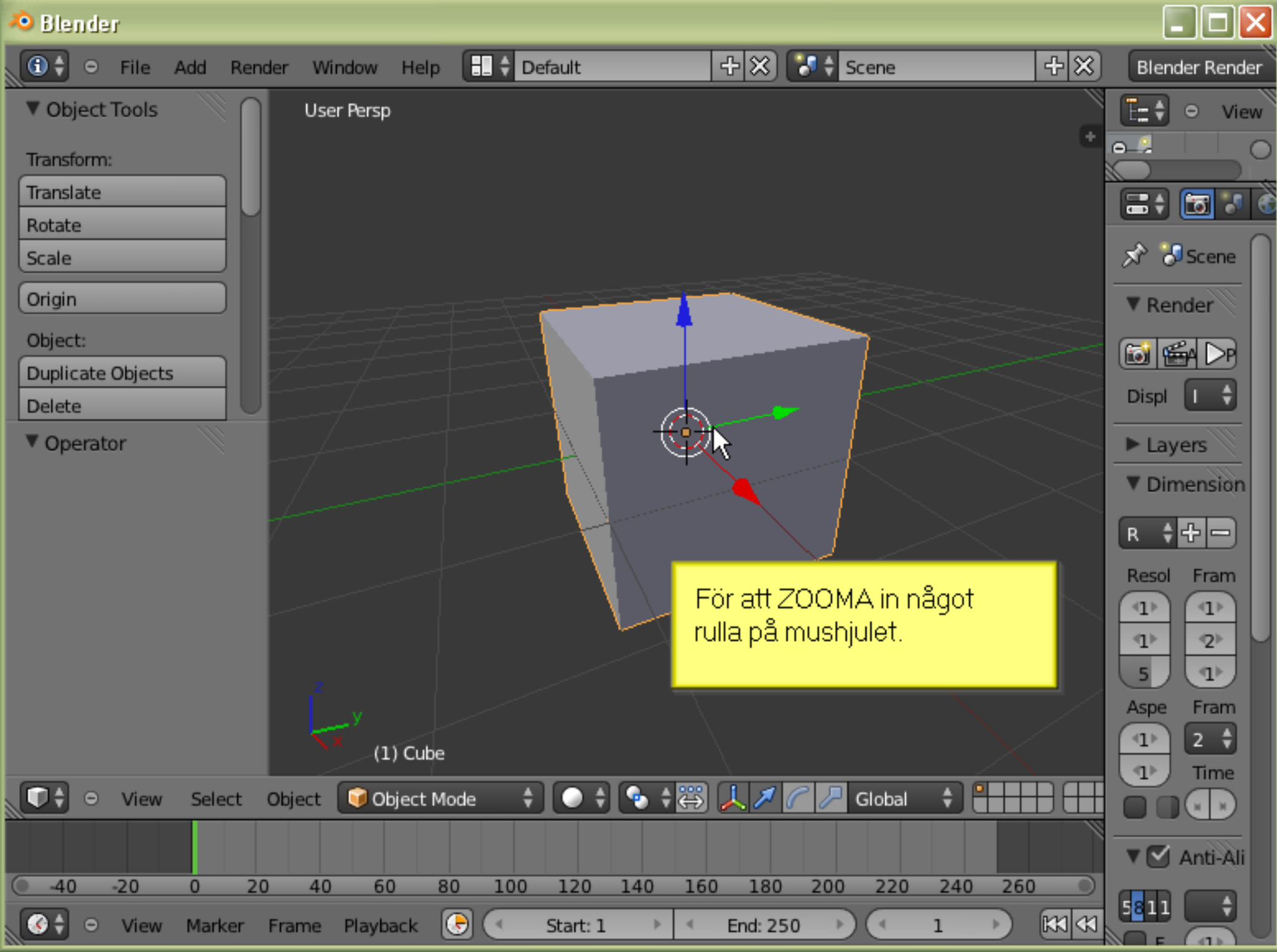


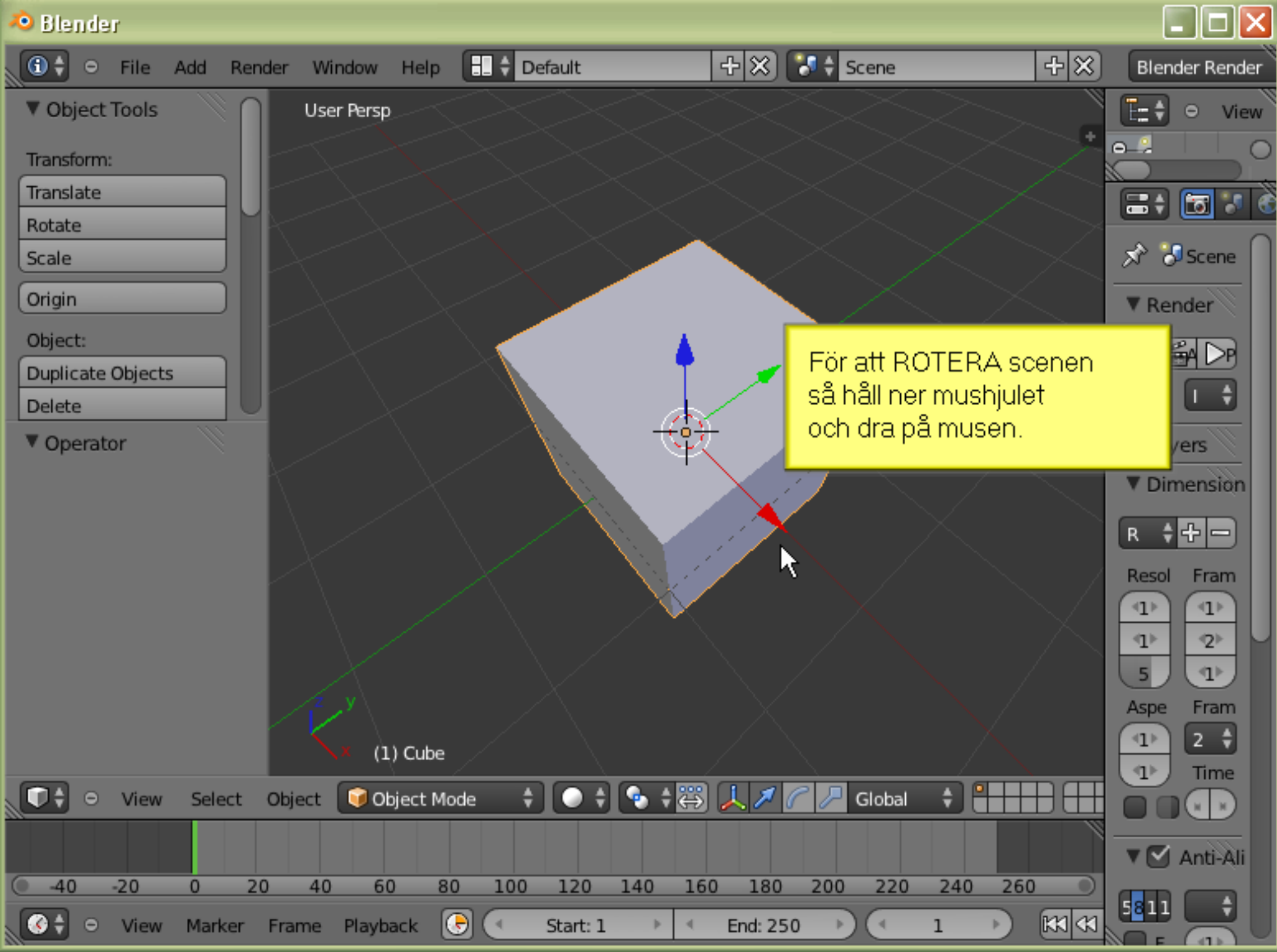
På scenen finns nu en grå kub  
som är markerad - vald.

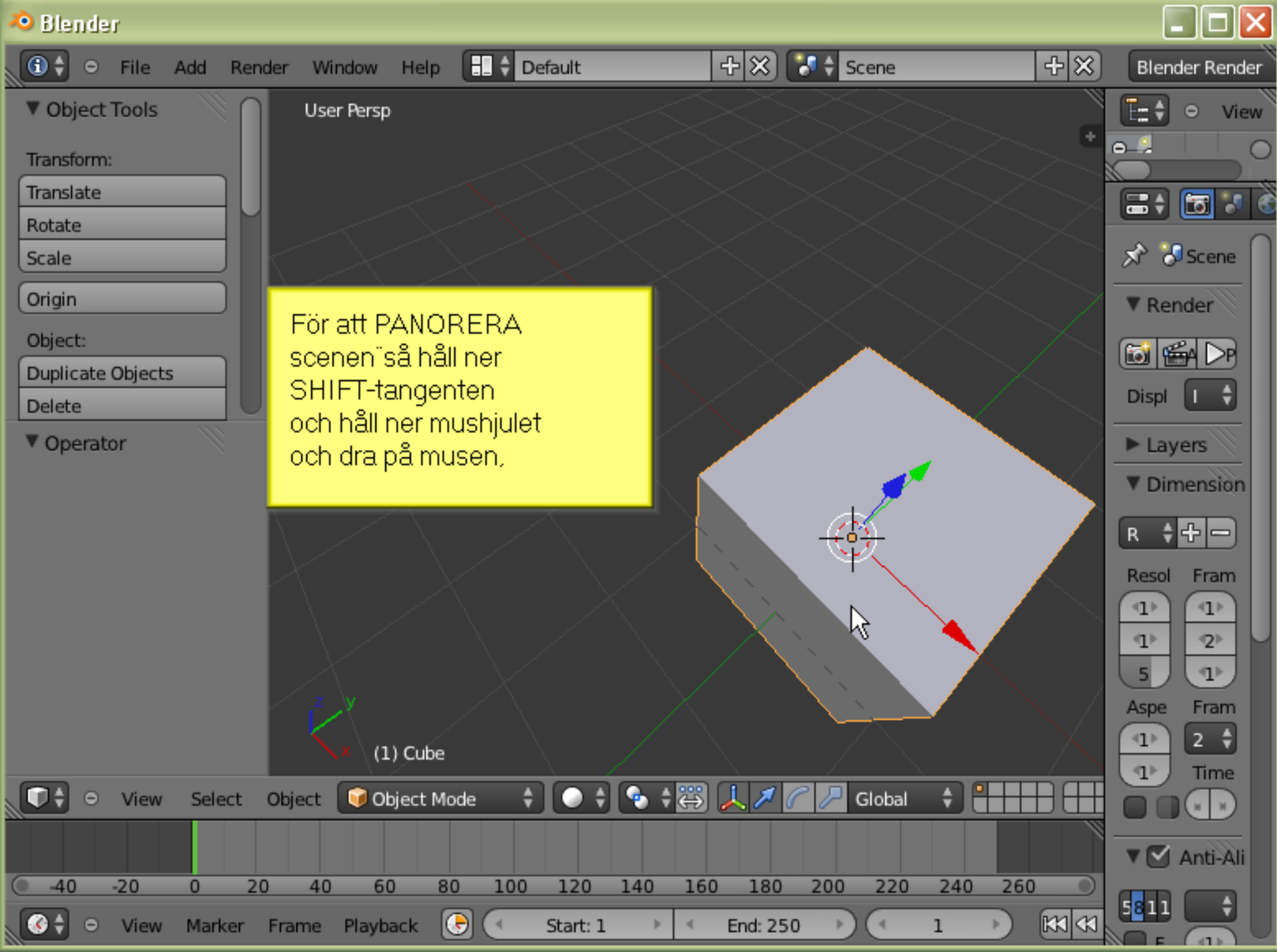
Att något är markerat - valt  
visas med orange färg.



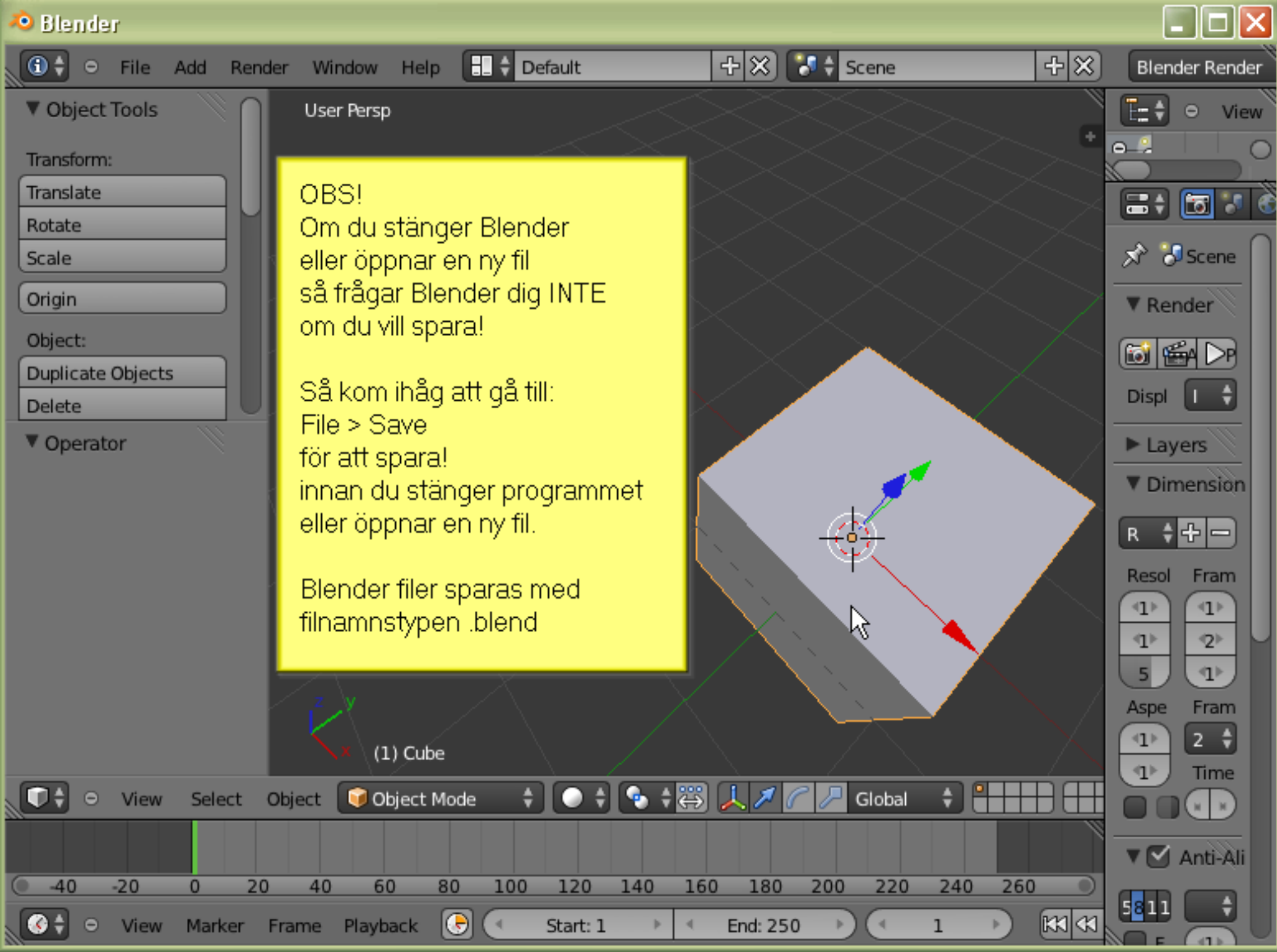










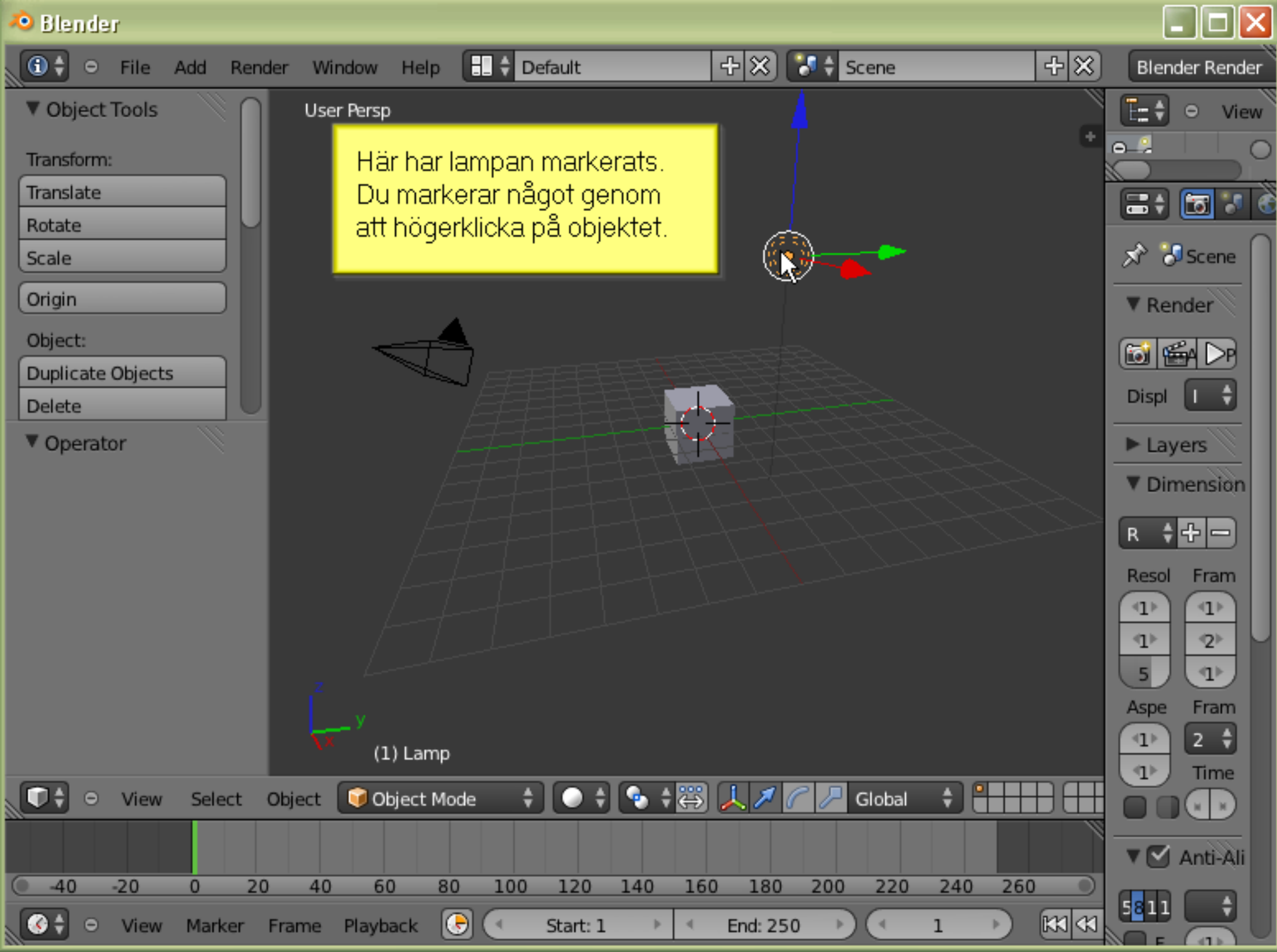


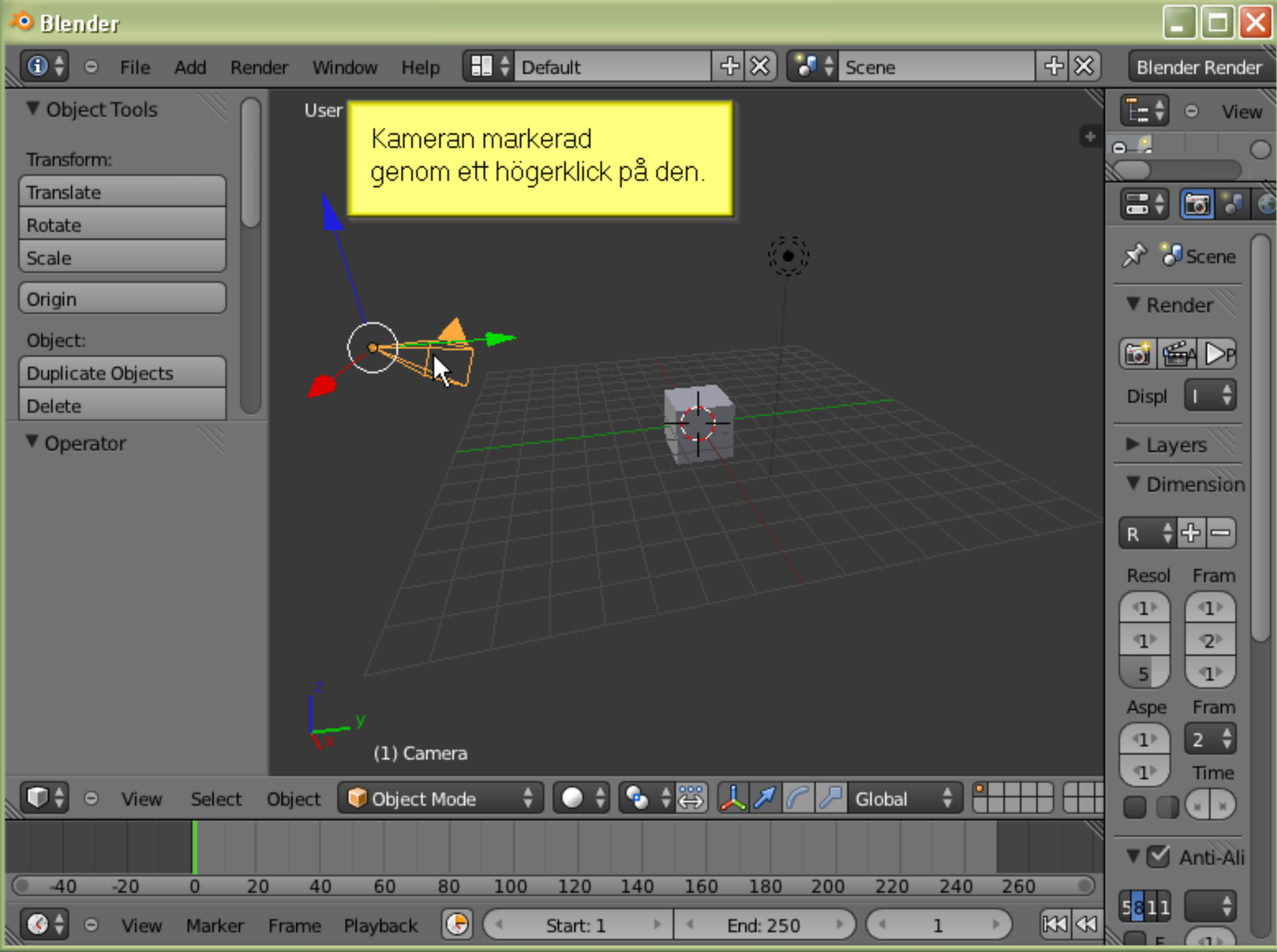
OBS!

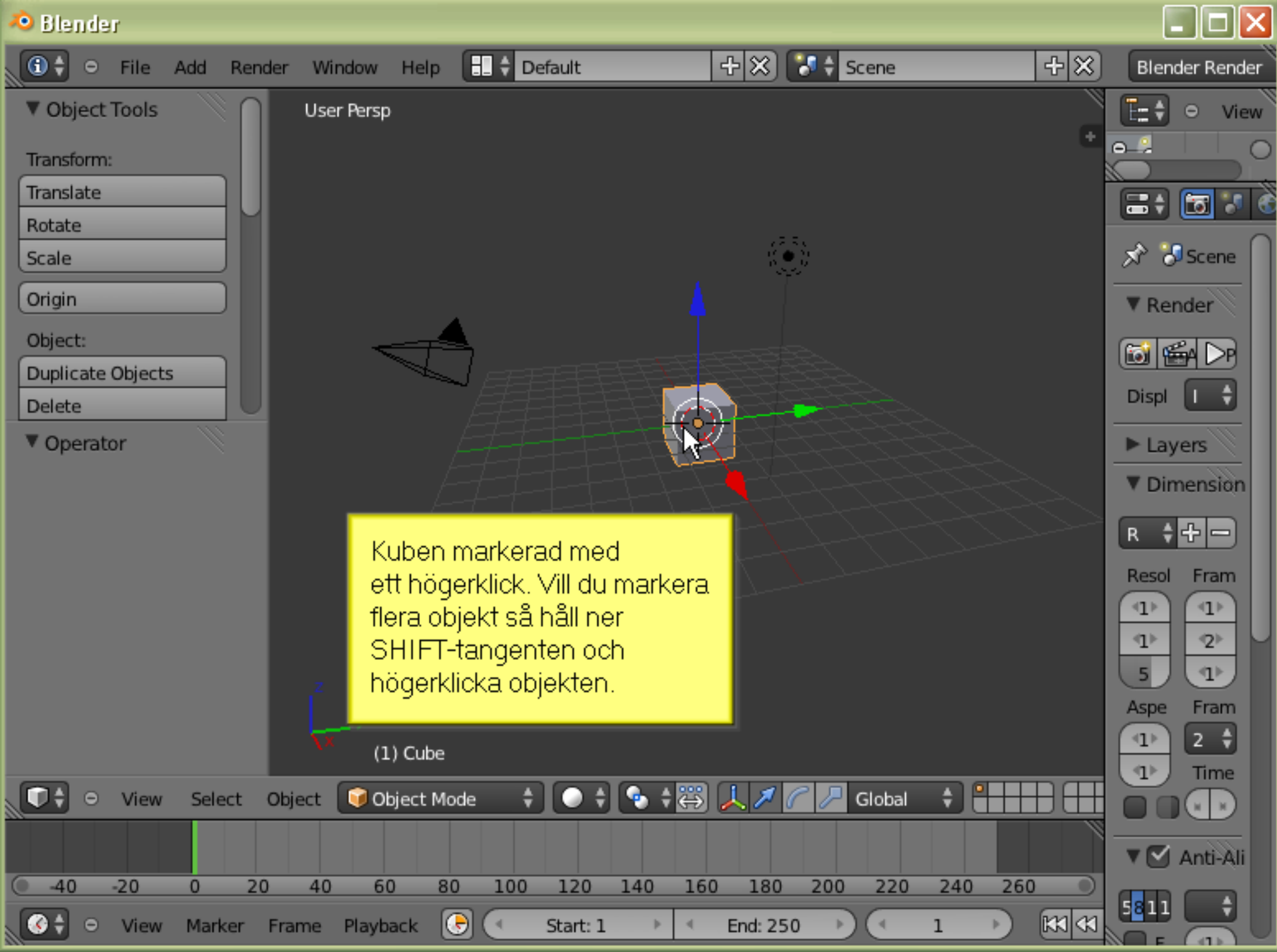
Om du stänger Blender  
eller öppnar en ny fil  
så frågar Blender dig INTE  
om du vill spara!

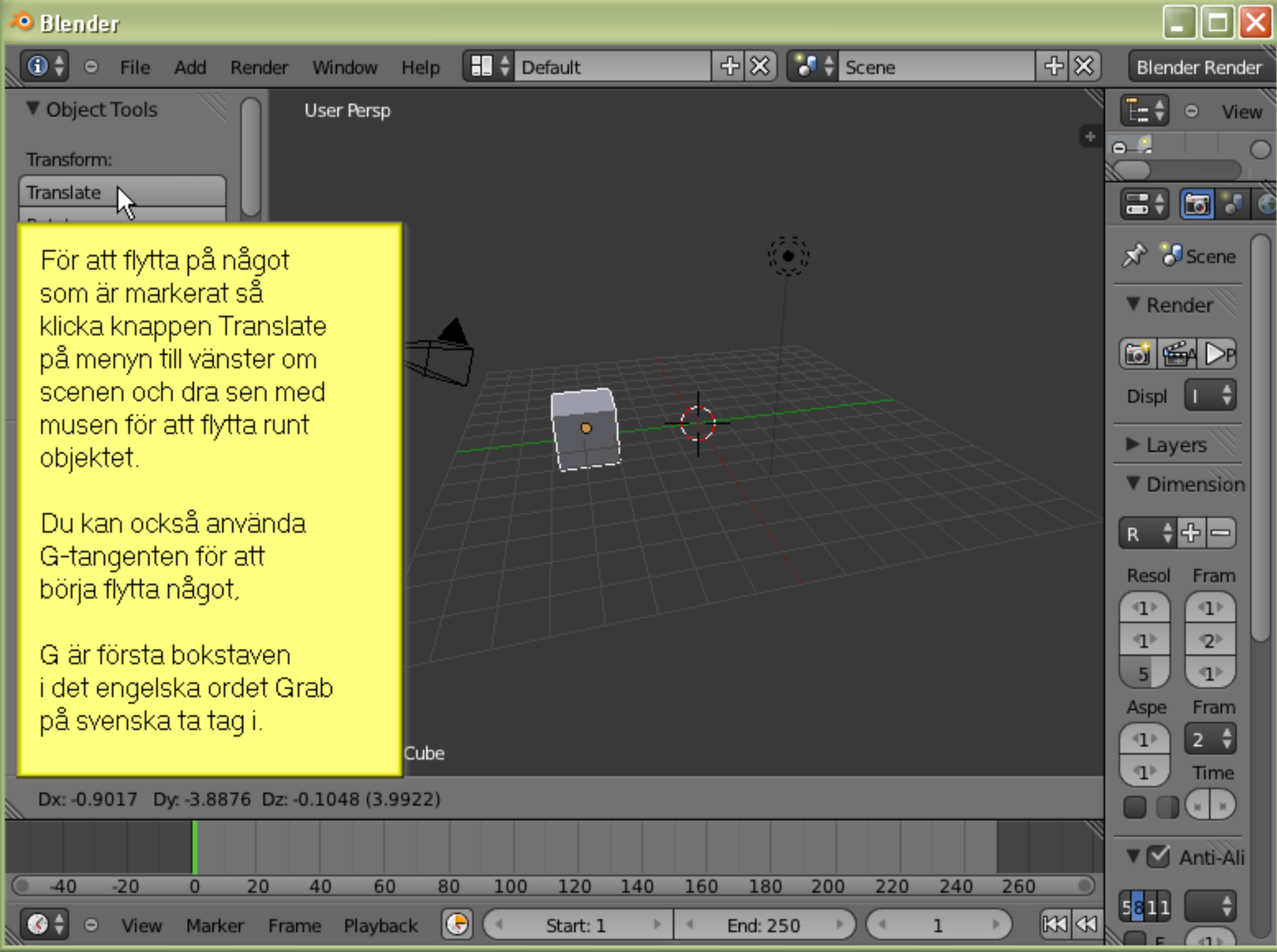
Så kom ihåg att gå till:  
File > Save  
för att spara!  
innan du stänger programmet  
eller öppnar en ny fil.

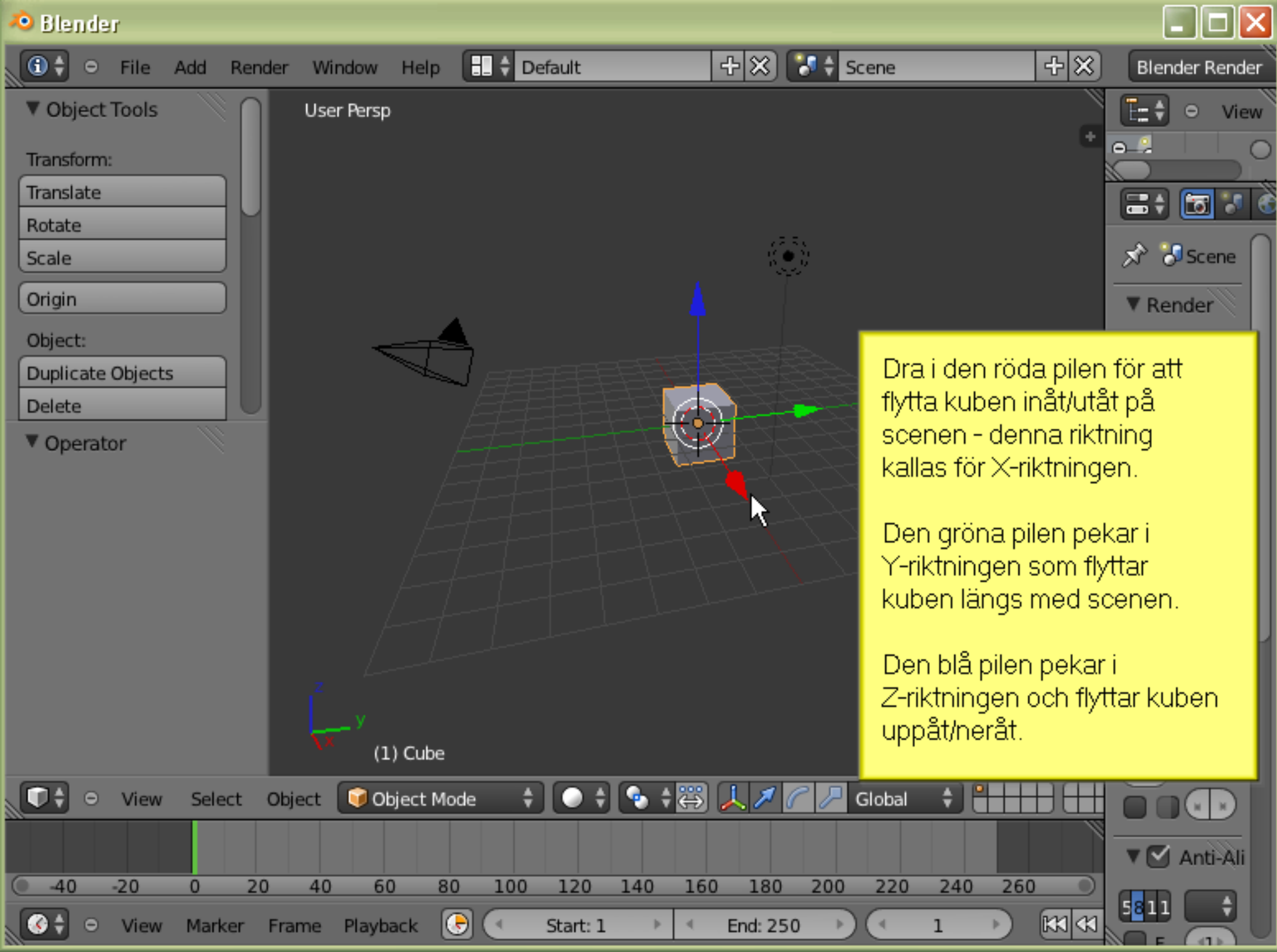
Blender filer sparas med  
filnamnstypen .blend











## Object Tools

### Transform:

Translate

Rotate

Scale

Origin

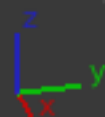
### Object:

Duplicate Objects

Delete

## Operator

User Persp



(1) Cube

Dra i den röda pilen för att flytta kuben inåt/utåt på scenen - denna riktning kallas för X-riktningen.

Den gröna pilen pekar i Y-riktningen som flyttar kuben längs med scenen.

Den blå pilen pekar i Z-riktningen och flyttar kuben uppåt/neråt.

View Select Object Object Mode

-40 -20 0 20 40 60 80 100 120 140 160 180 200 220 240 260

View Marker Frame Playback

Start: 1

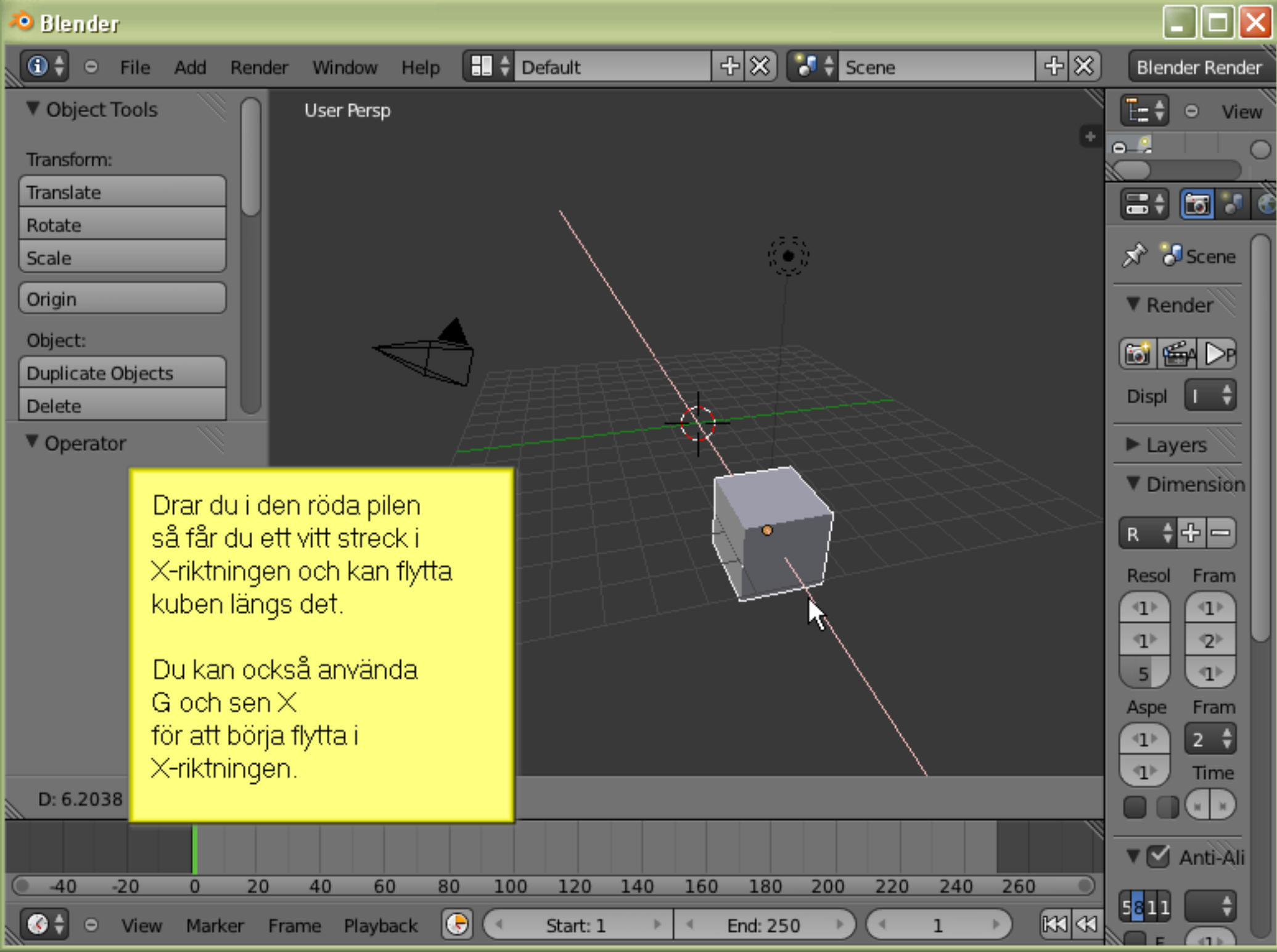
End: 250

1

5811

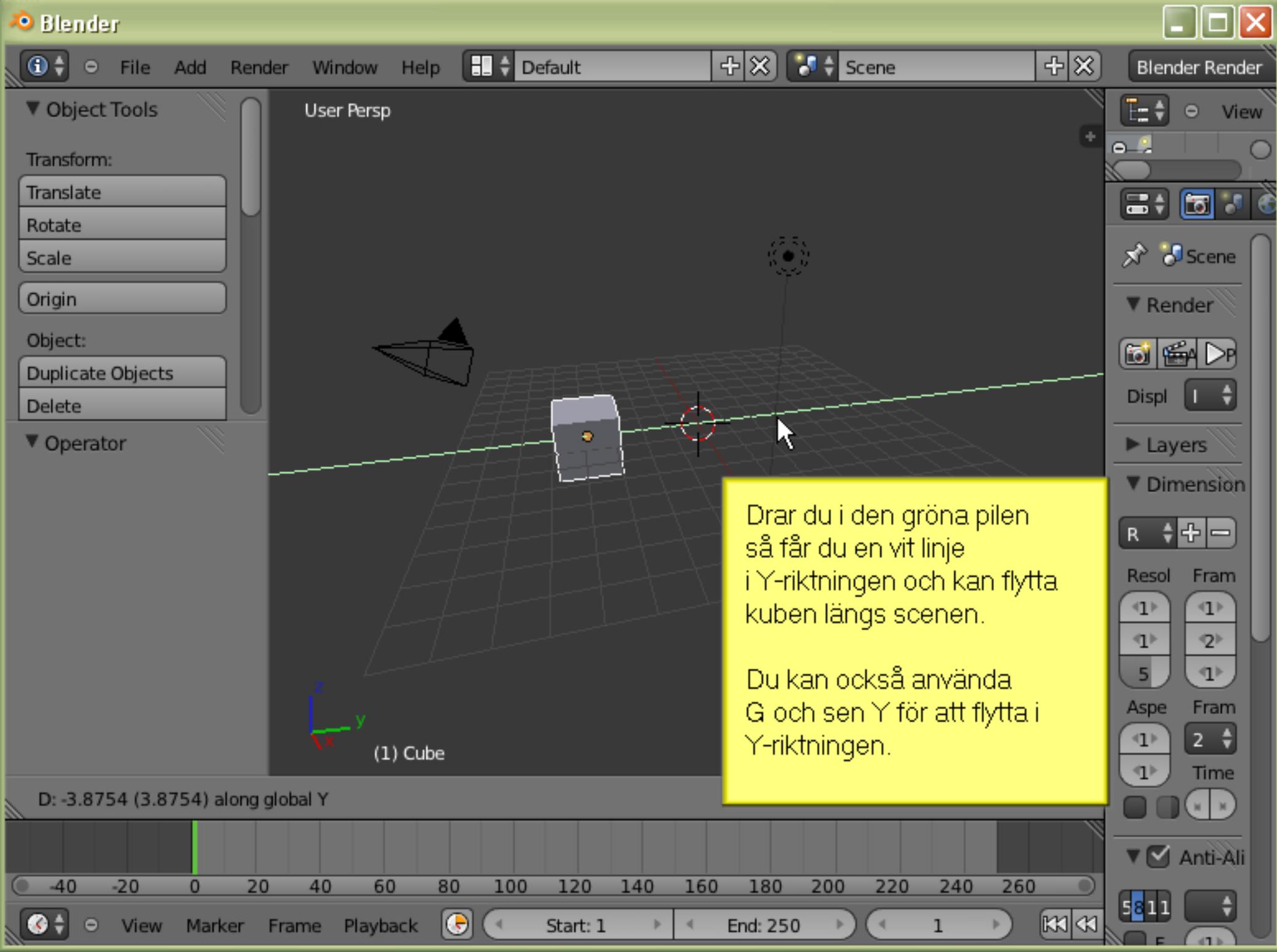
Anti-Ali

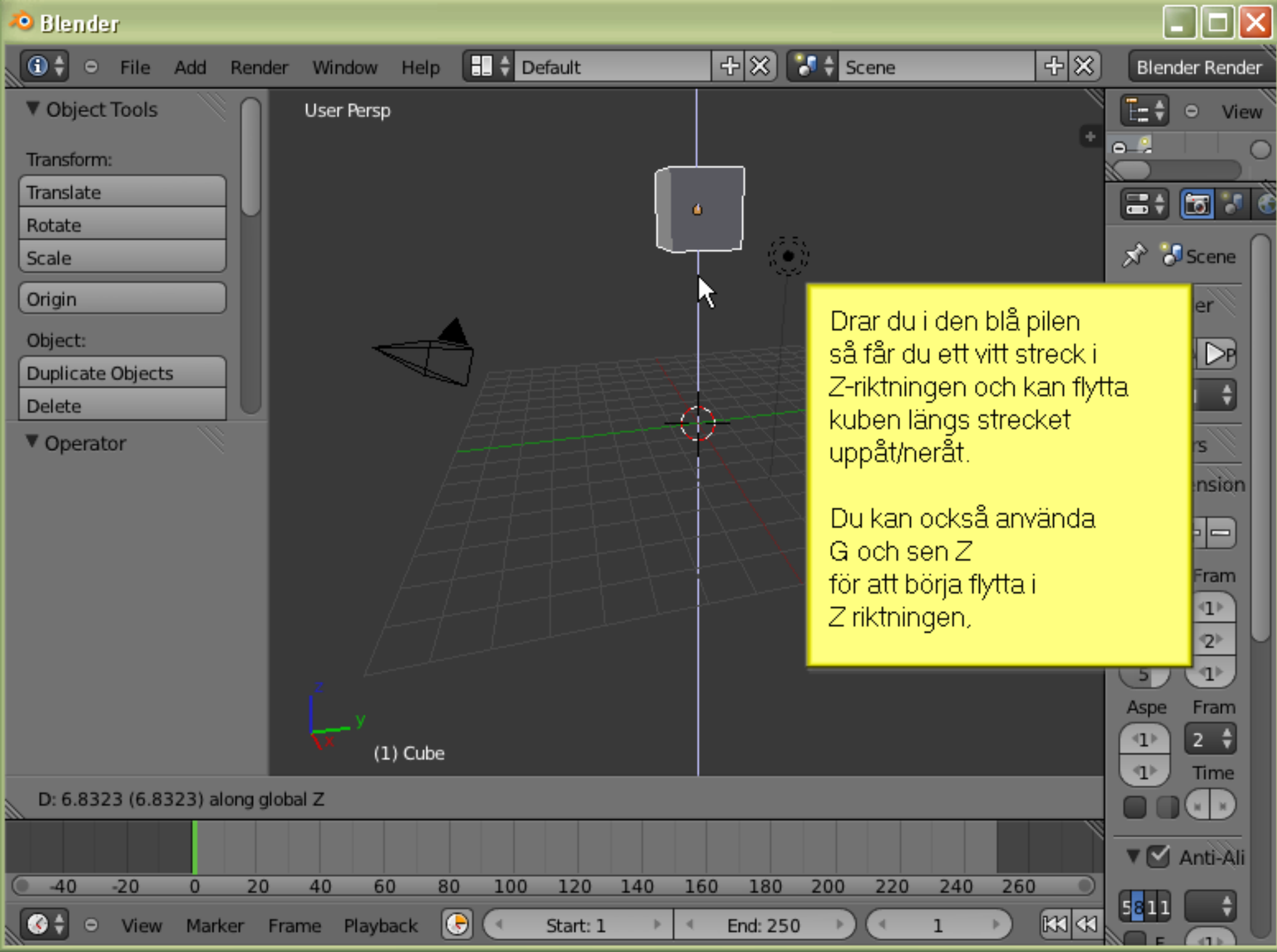




Drar du i den röda pilen så får du ett vitt streck i X-riktningen och kan flytta kuben längs det.

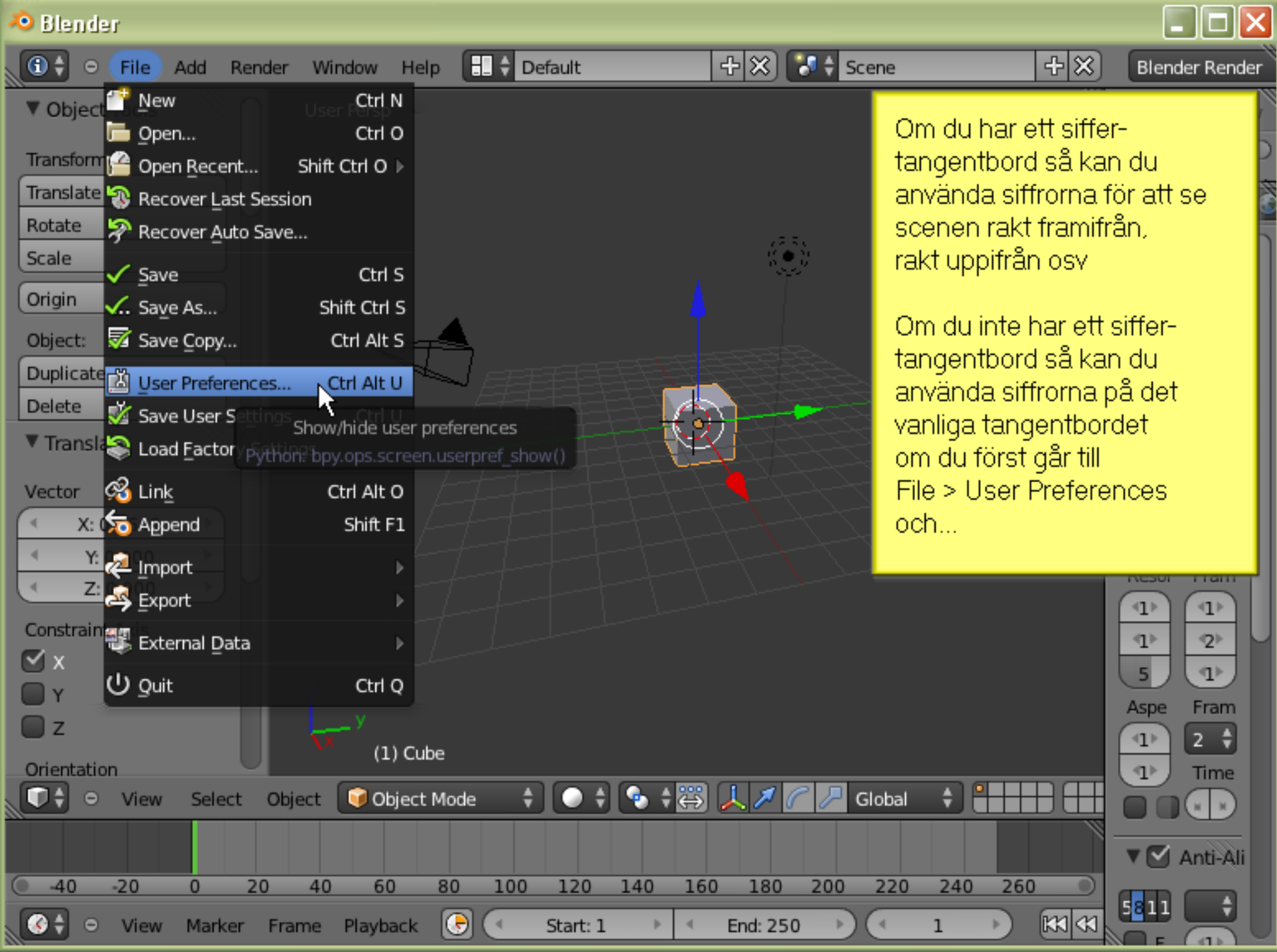
Du kan också använda G och sen X för att börja flytta i X-riktningen.





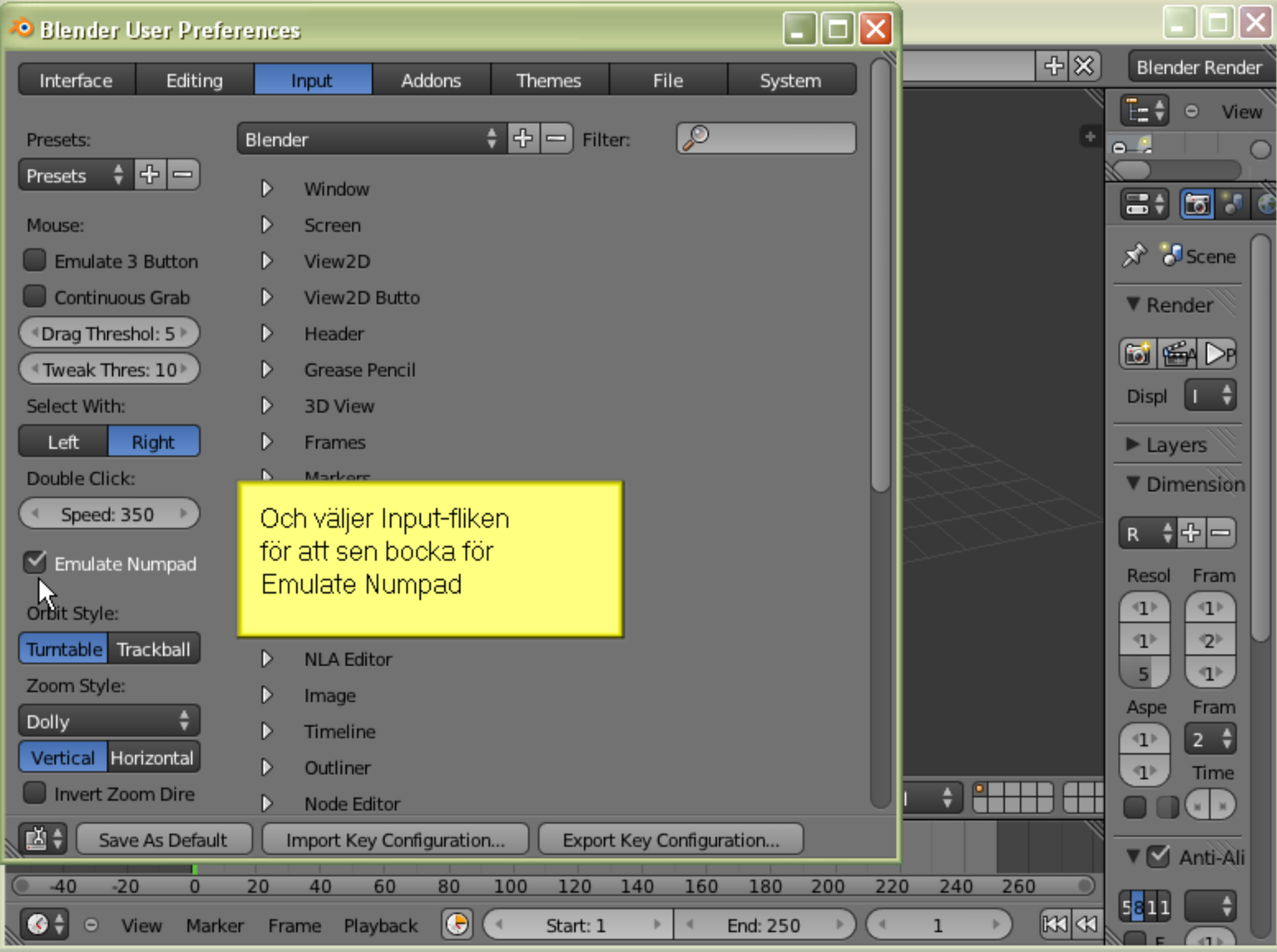
Drar du i den blå pilen så får du ett vitt streck i Z-riktningen och kan flytta kuben längs strecket uppåt/neråt.

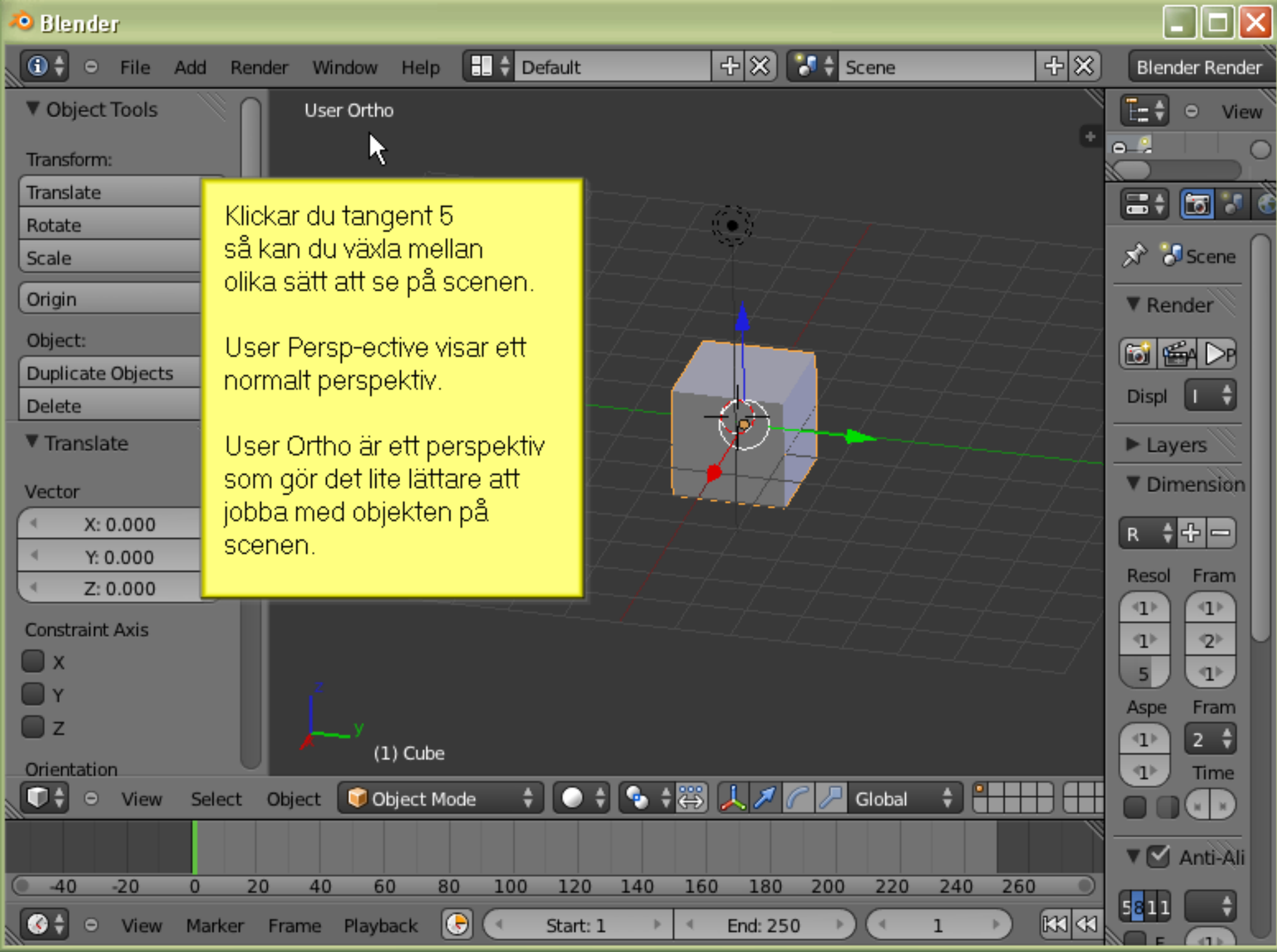
Du kan också använda G och sen Z för att börja flytta i Z riktningen.



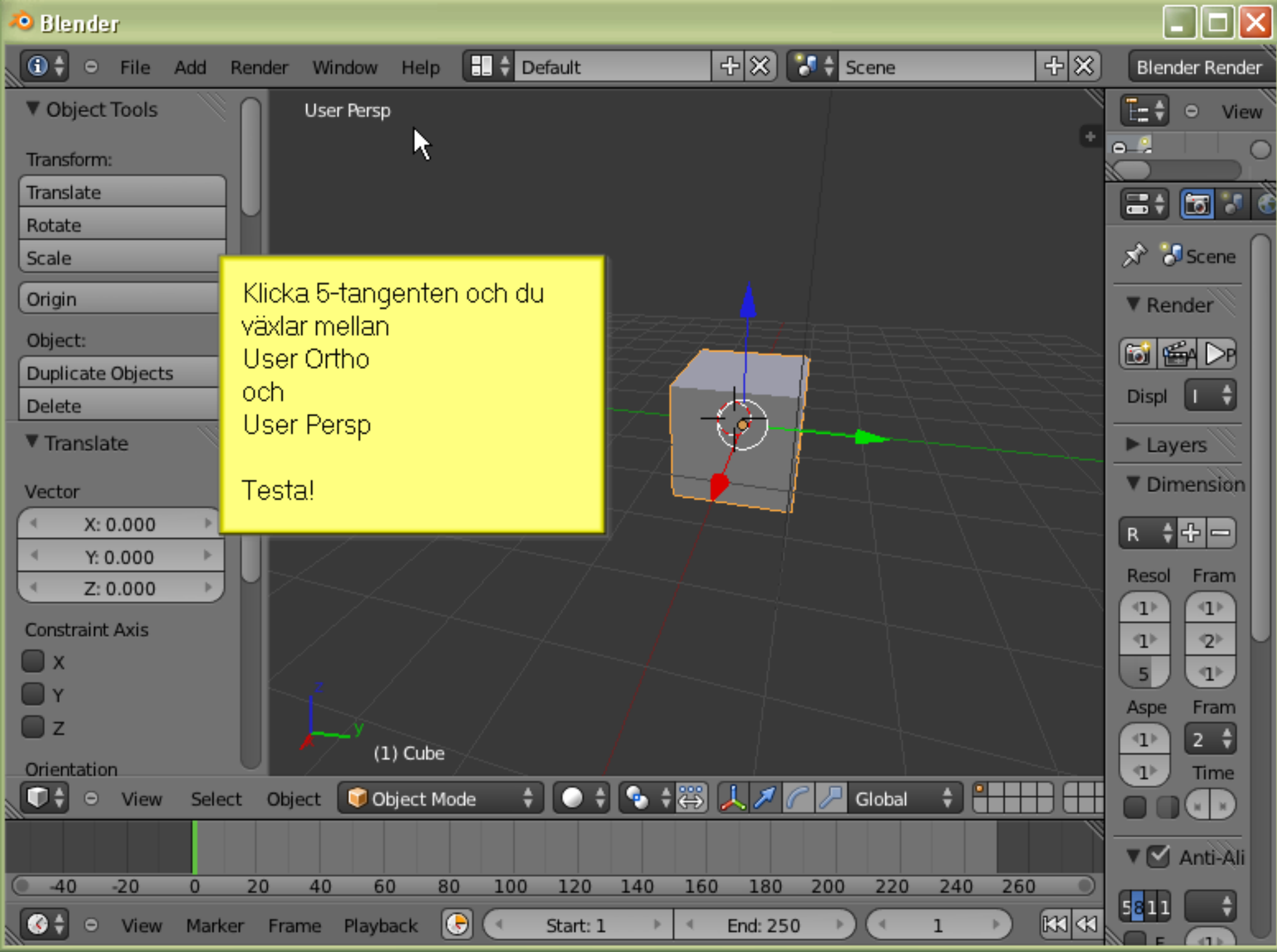
Om du har ett siffer-tangentbord så kan du använda siffrorna för att se scenen rakt framifrån, rakt uppifrån osv

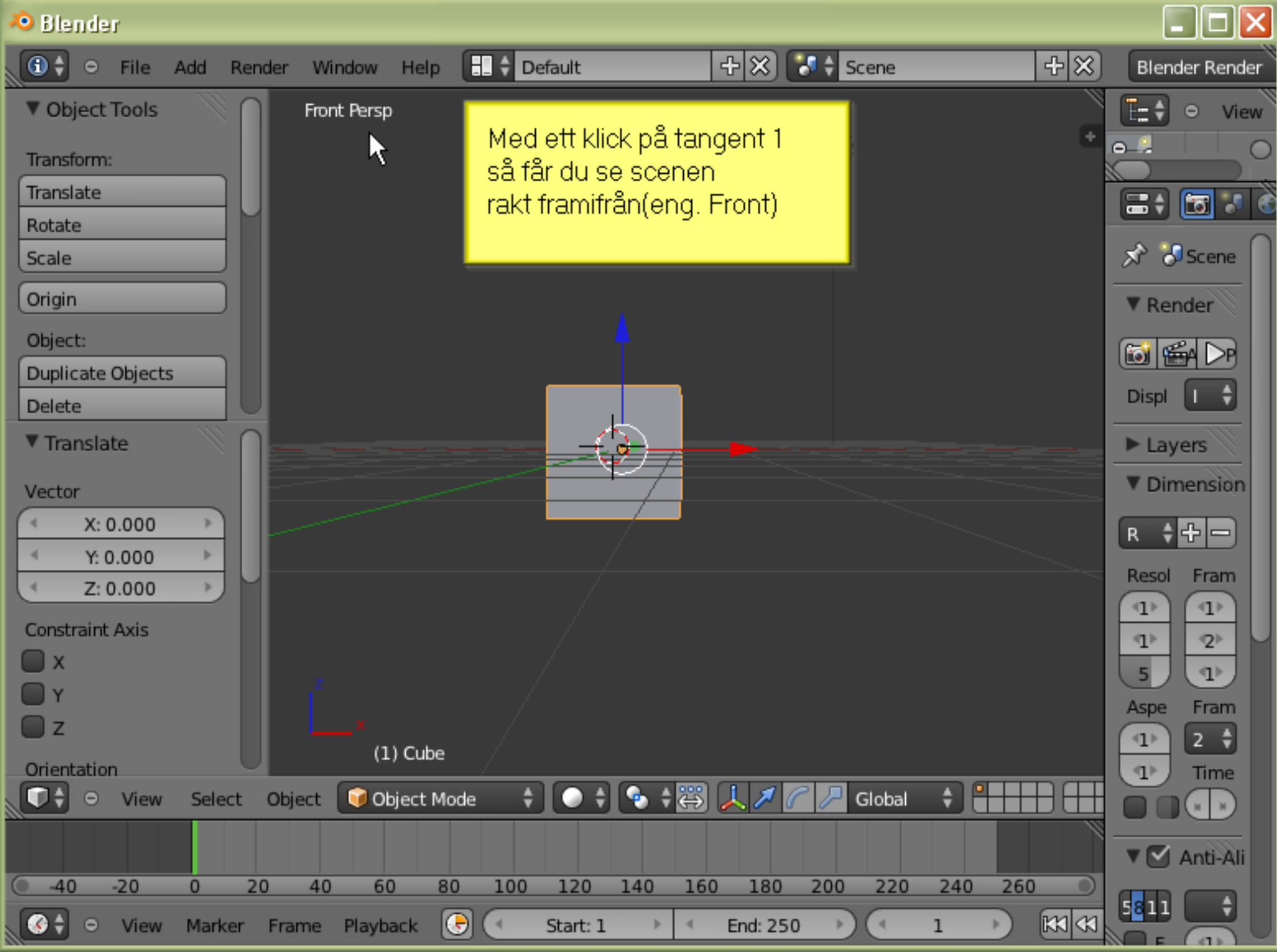
Om du inte har ett siffer-tangentbord så kan du använda siffrorna på det vanliga tangentbordet om du först går till File > User Preferences och...

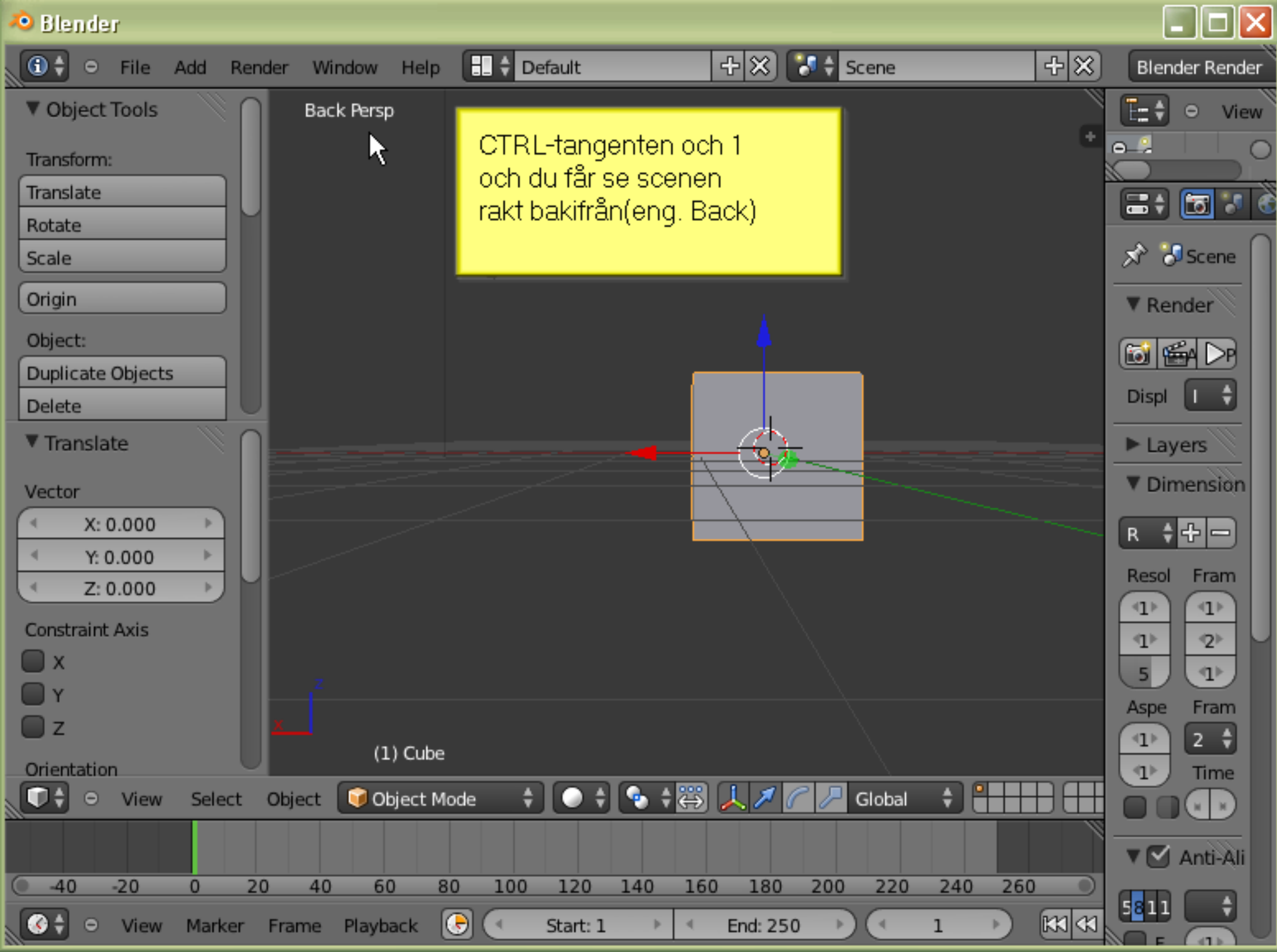


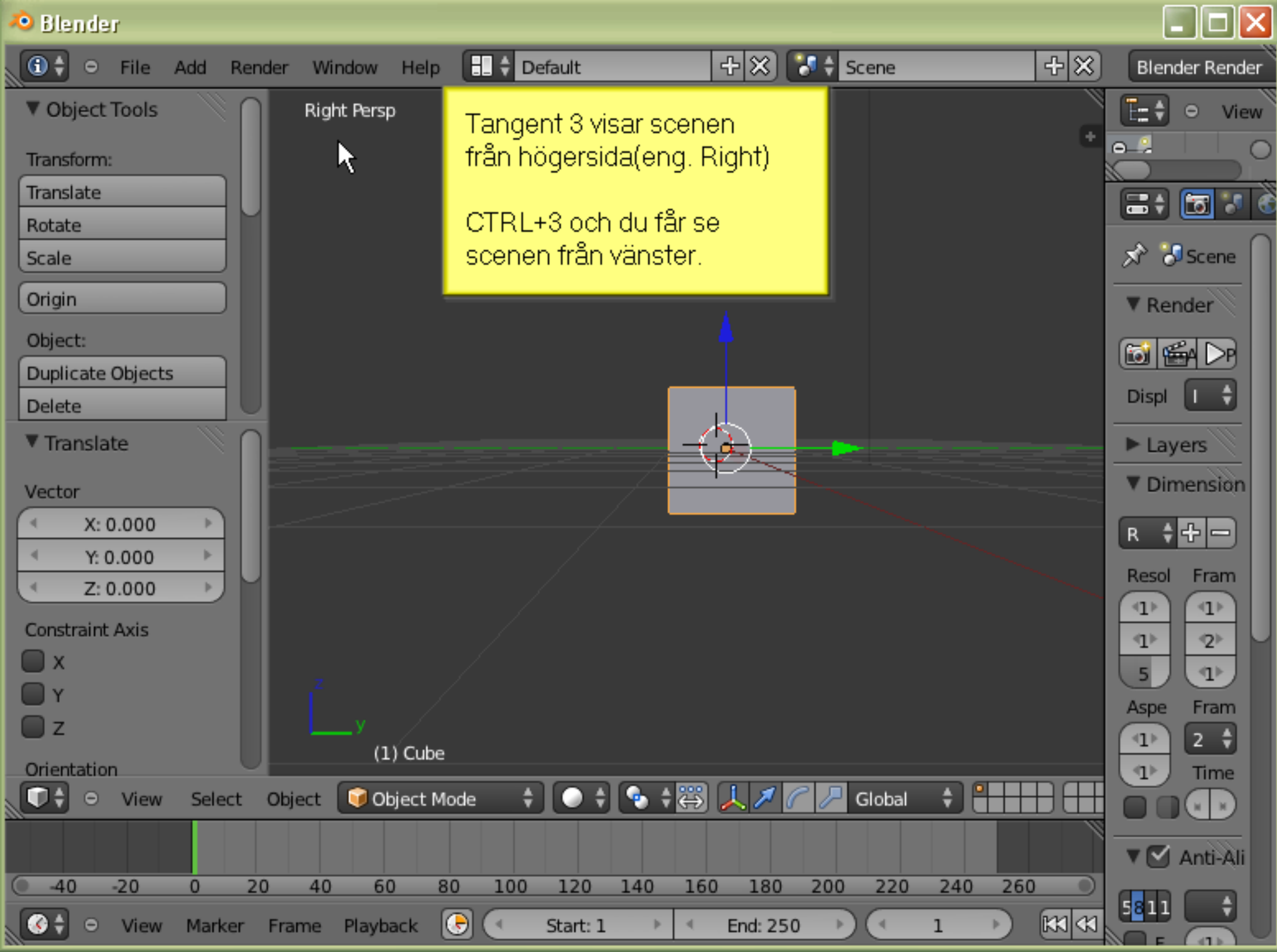


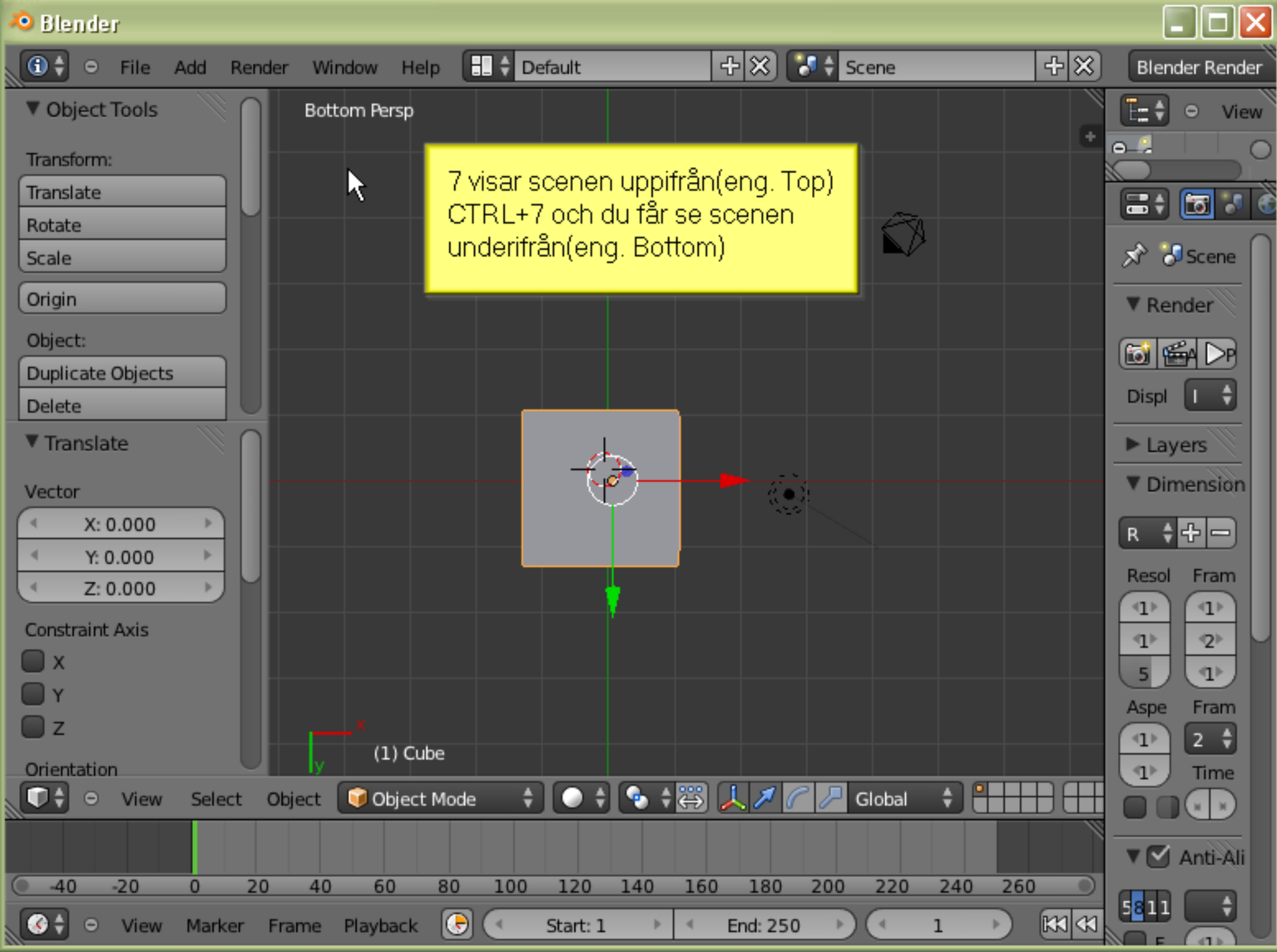


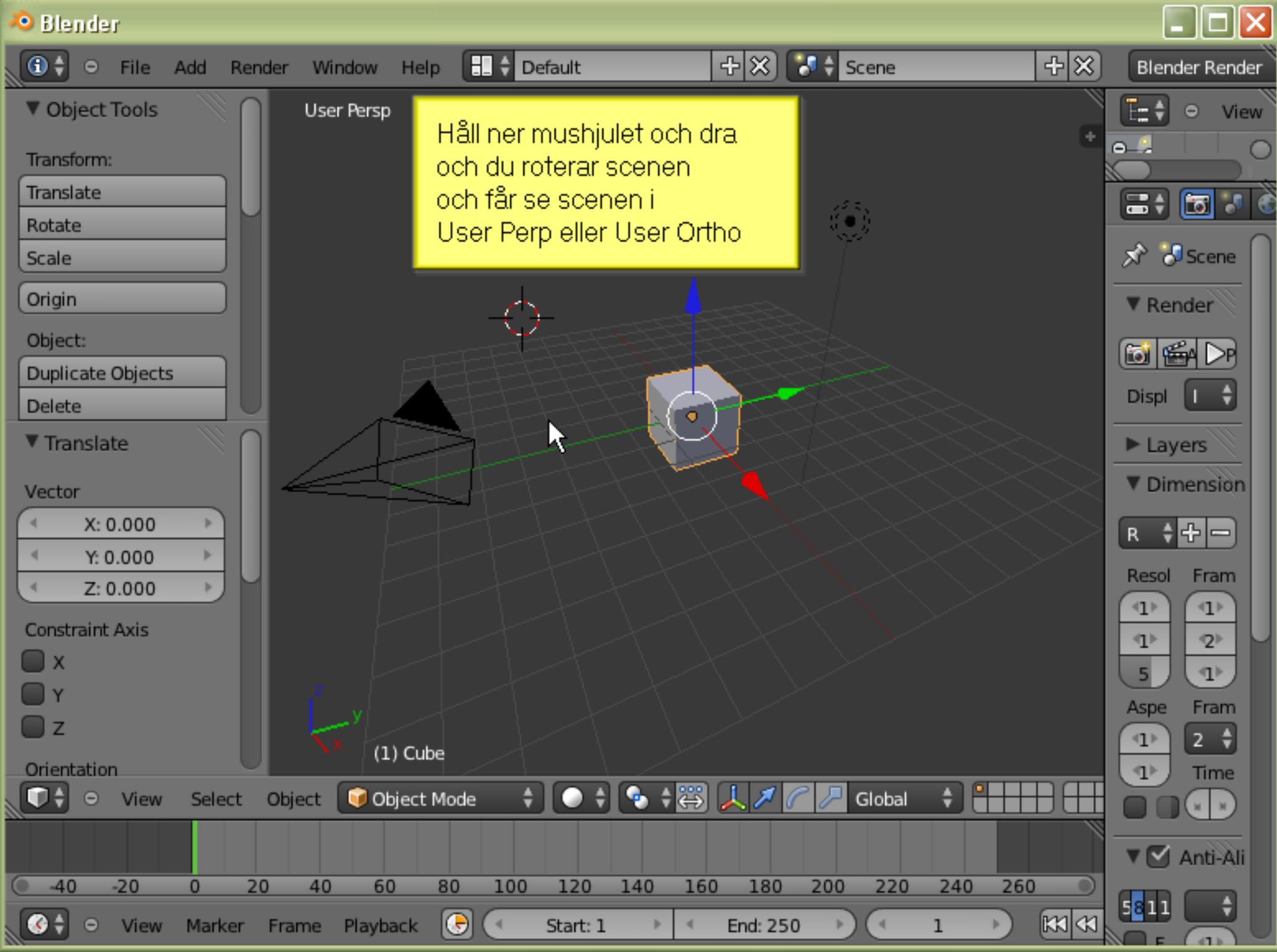




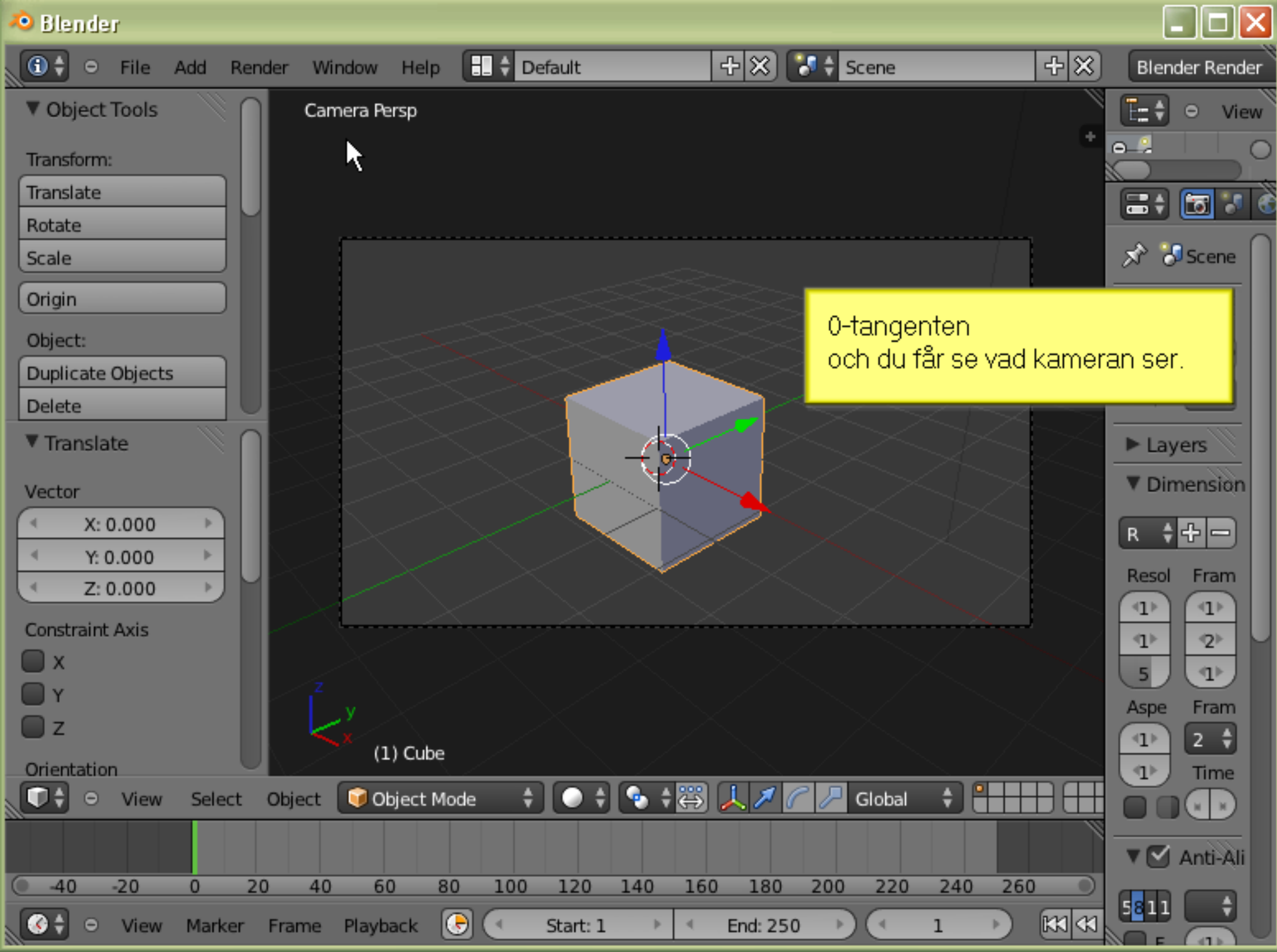


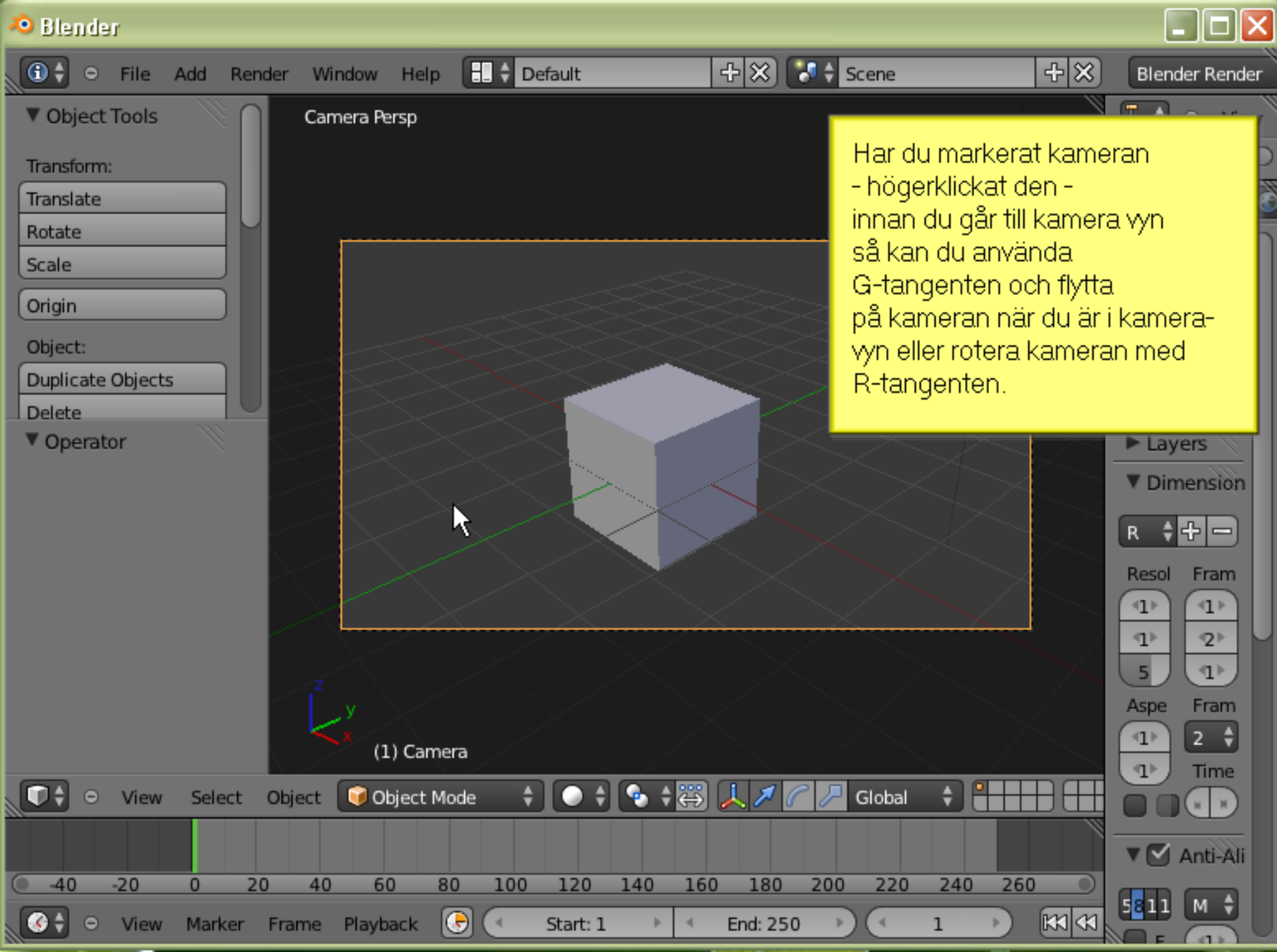


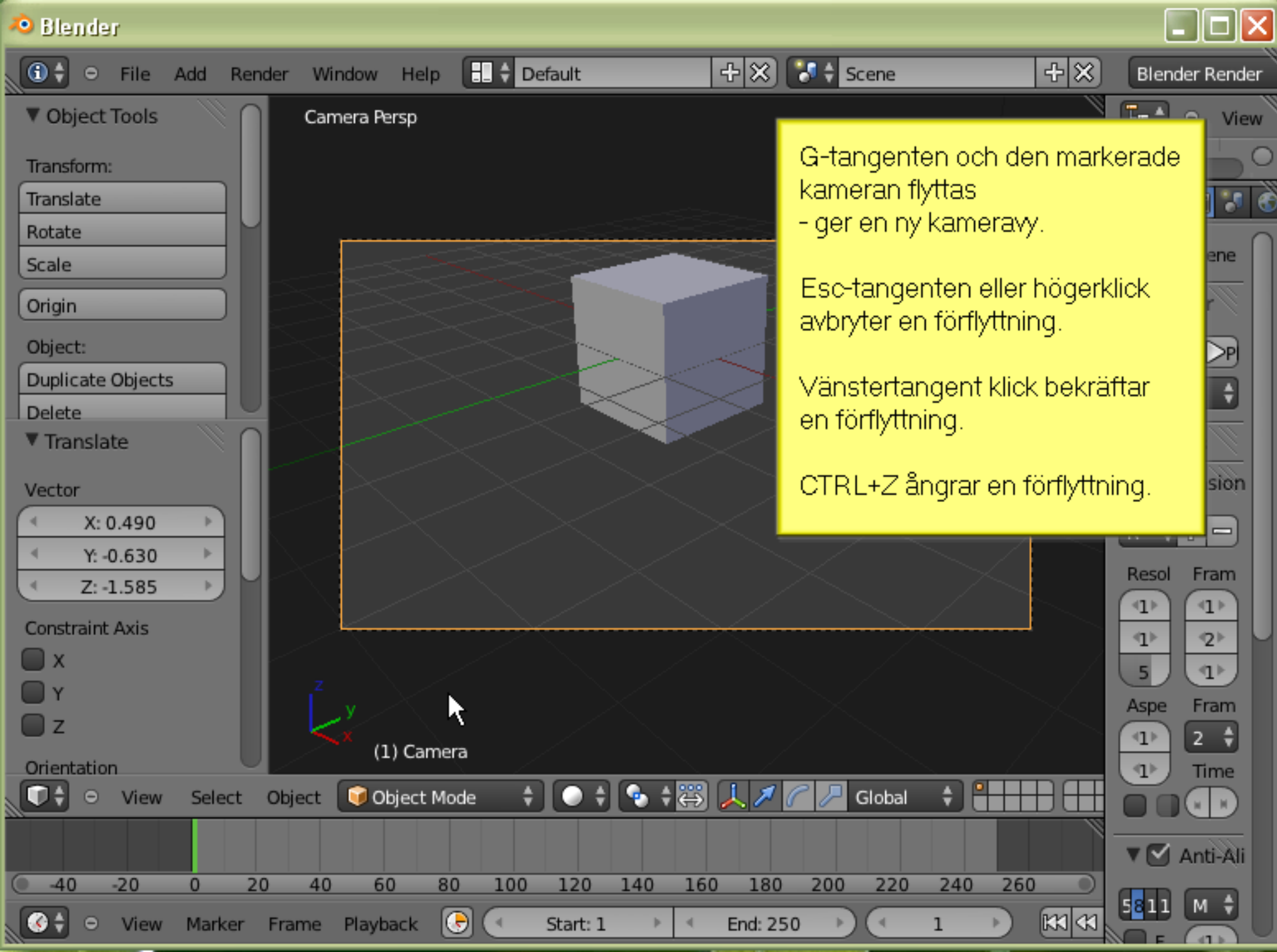


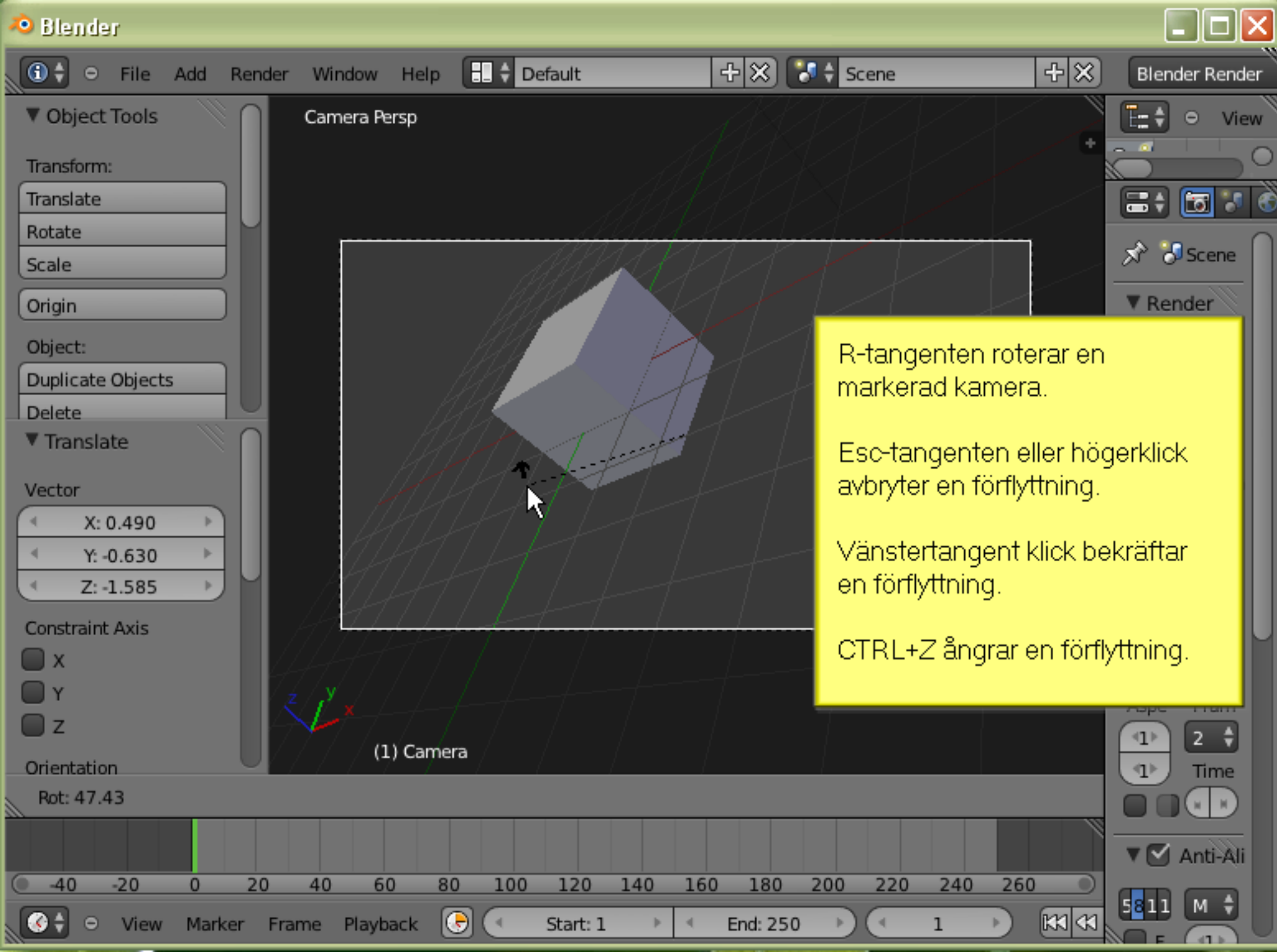


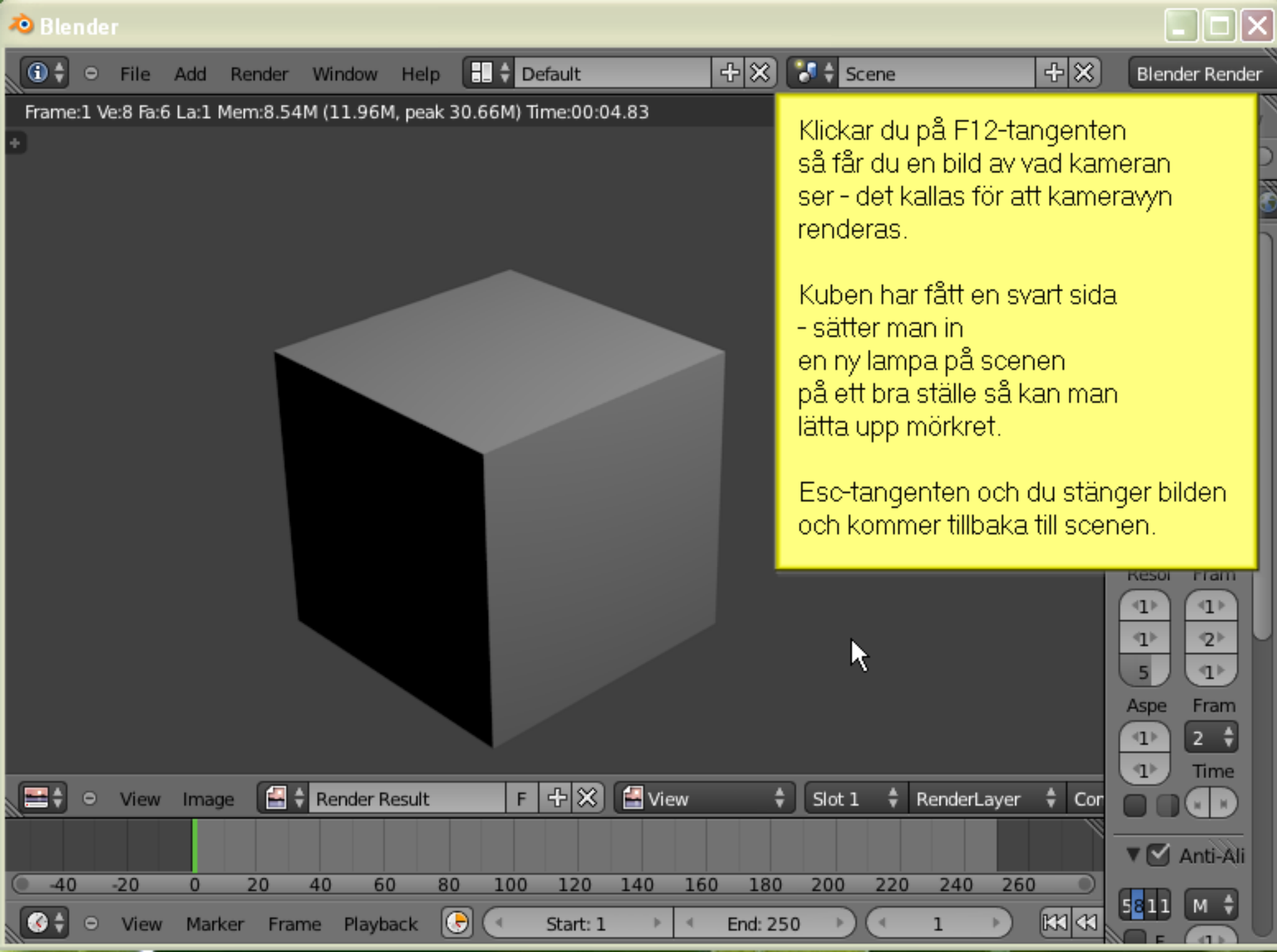


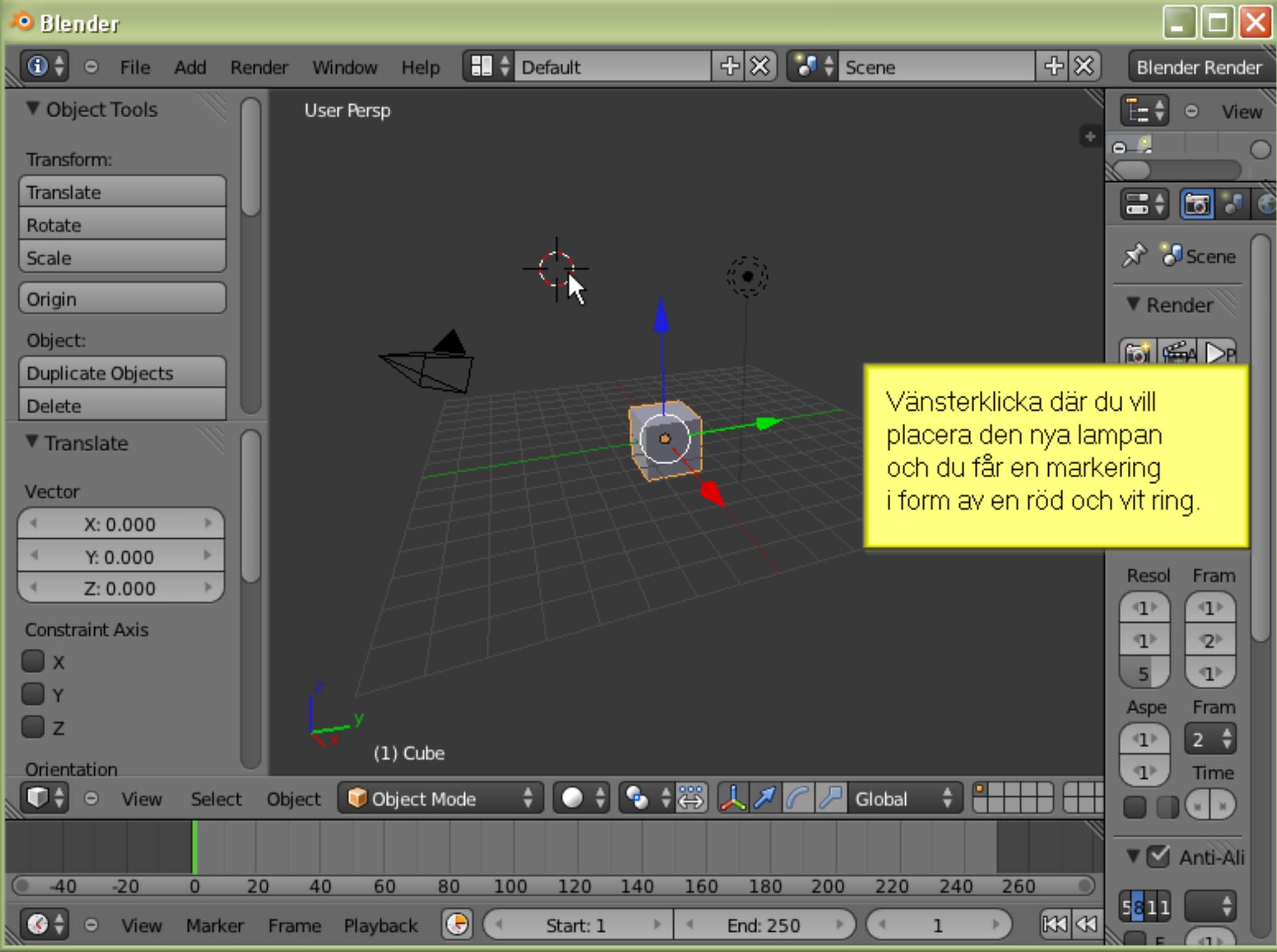


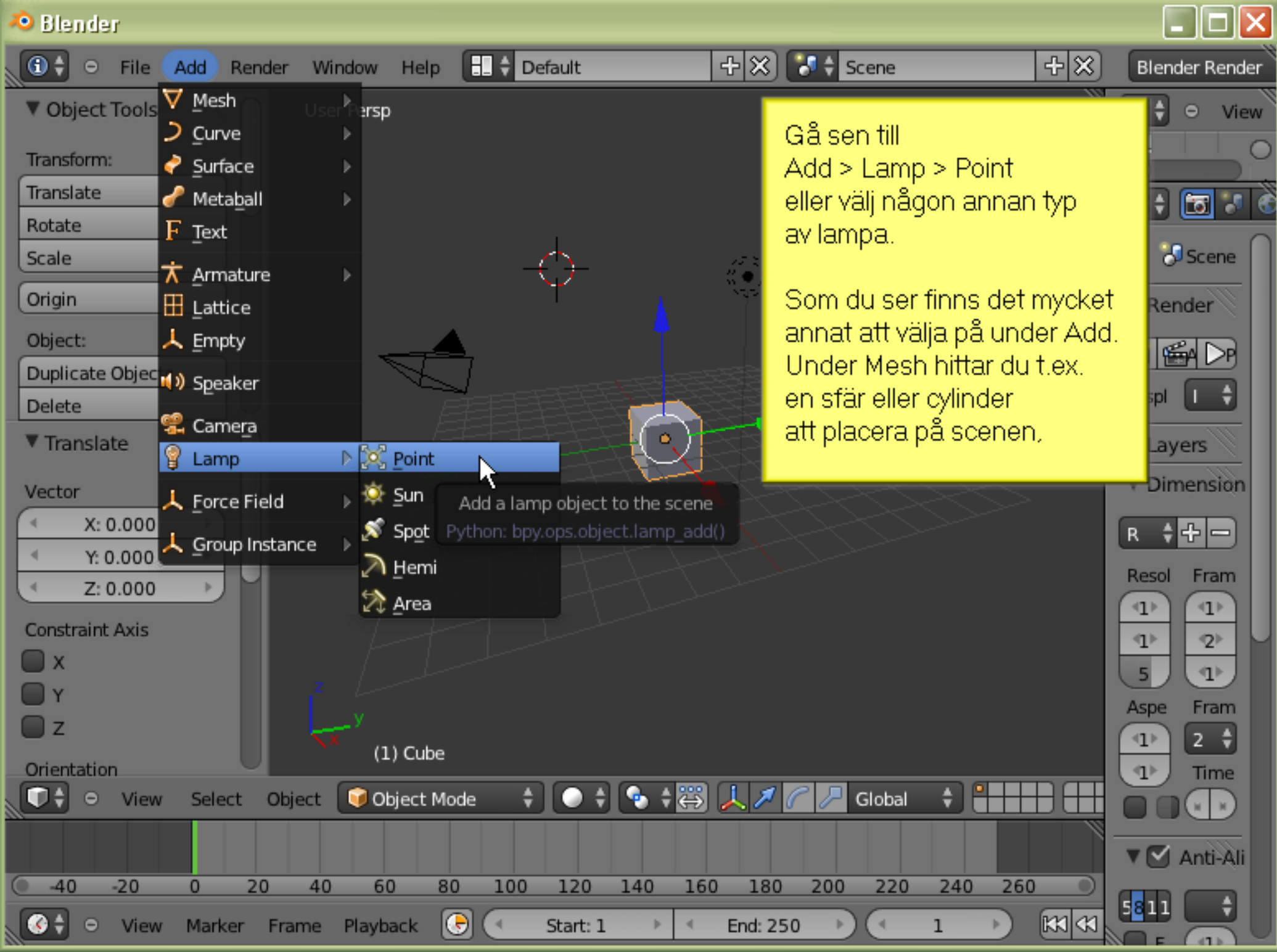




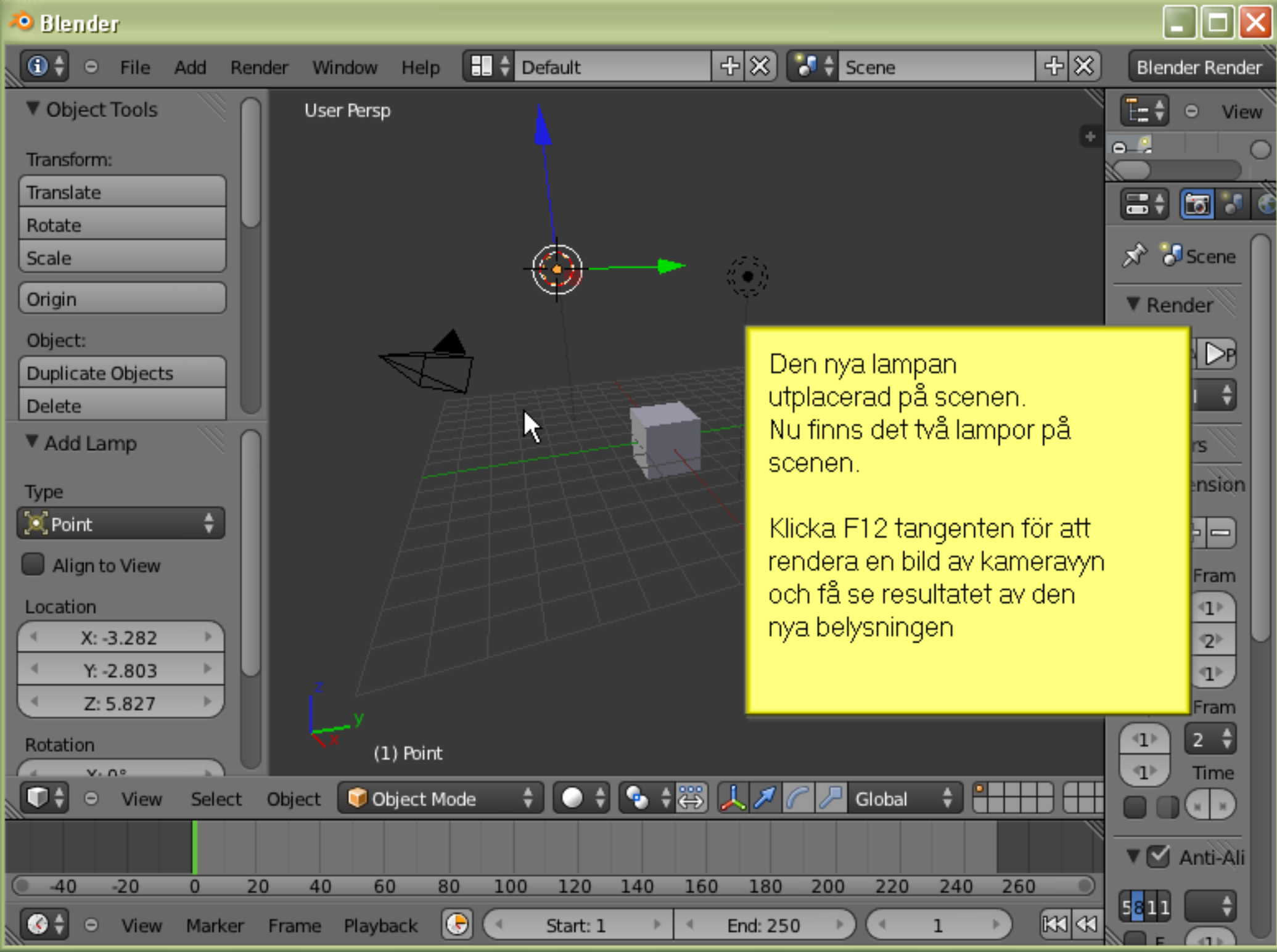






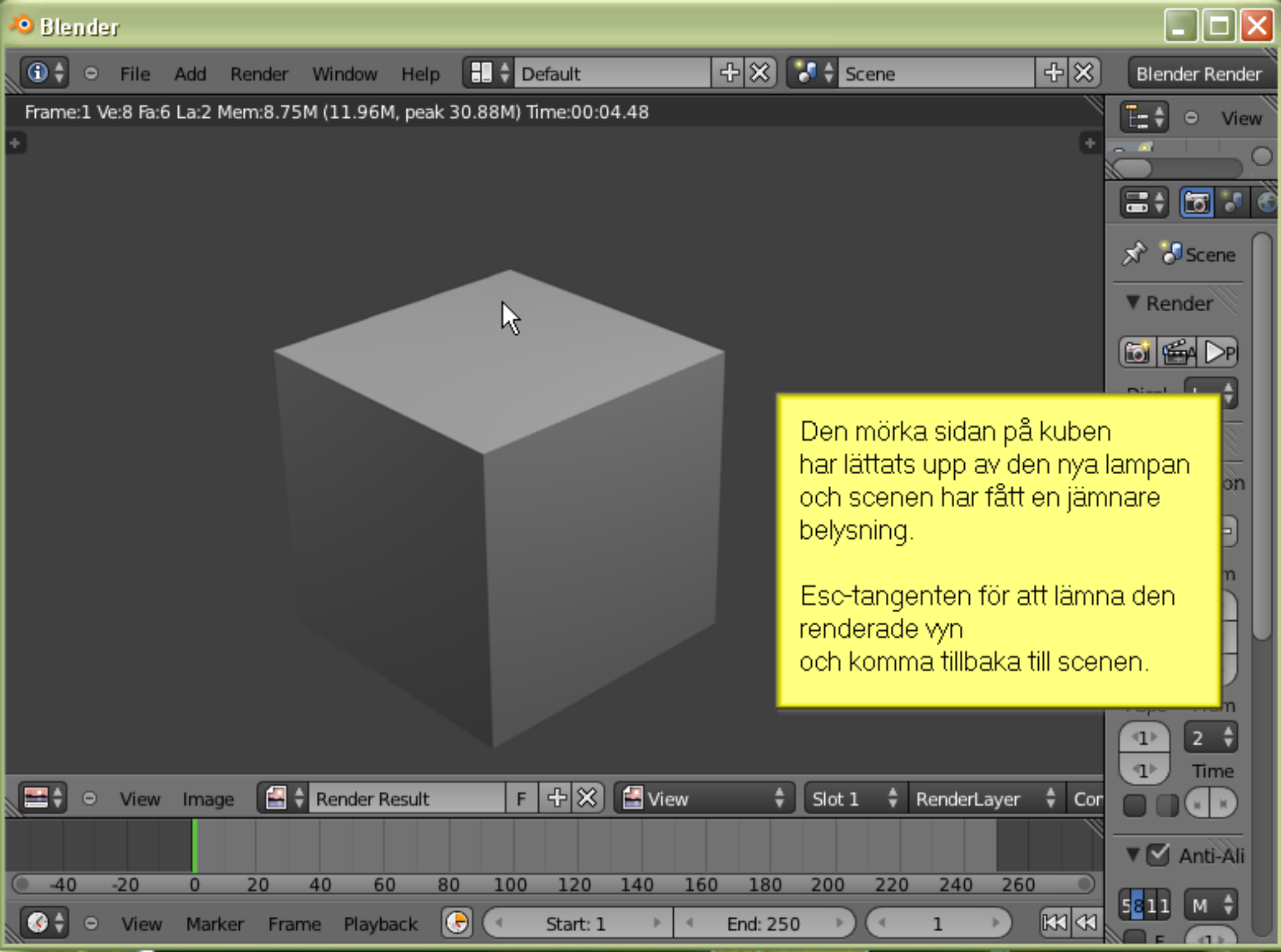






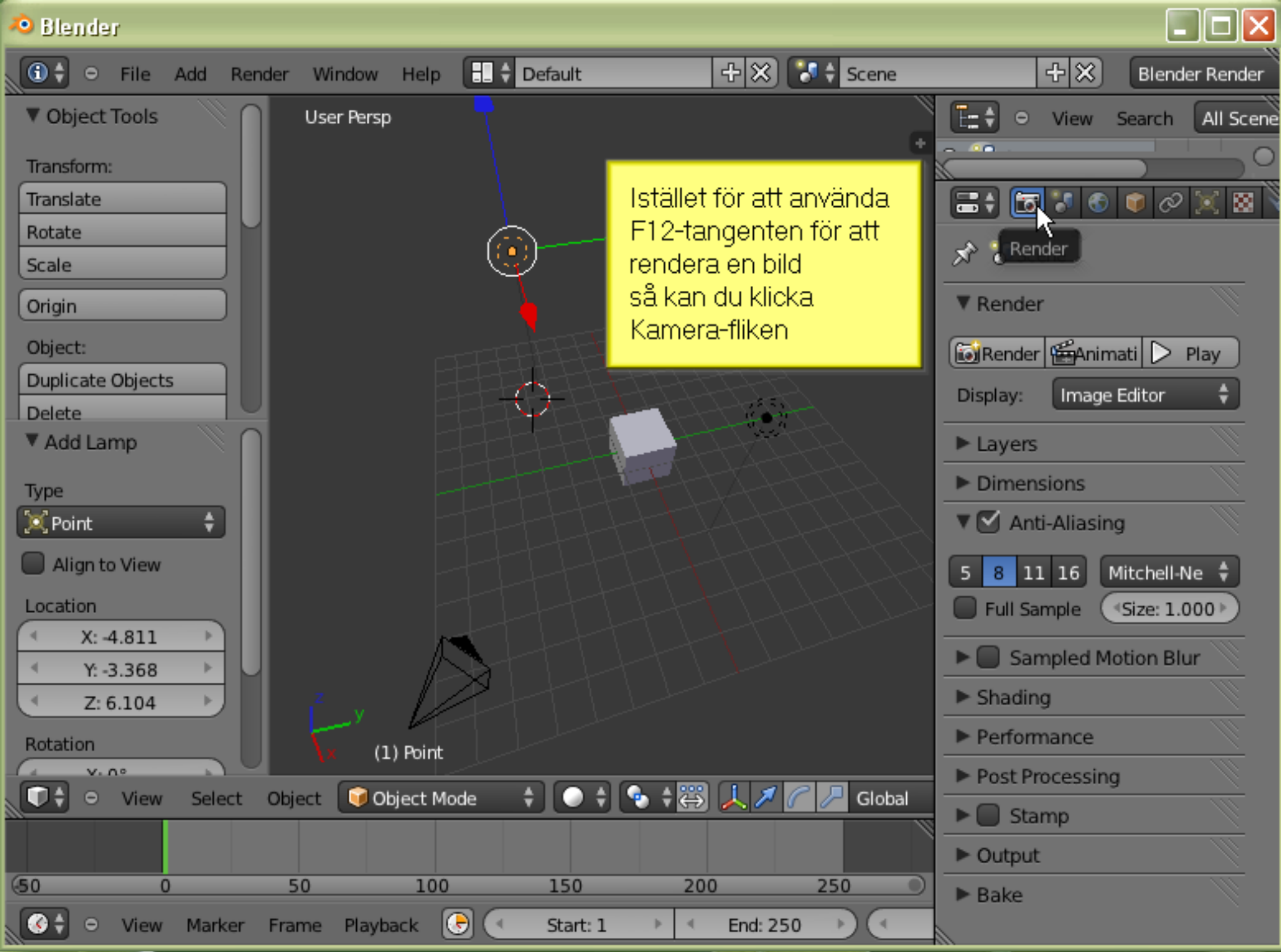
Den nya lampan  
utplacerad på scenen.  
Nu finns det två lampor på  
scenen.

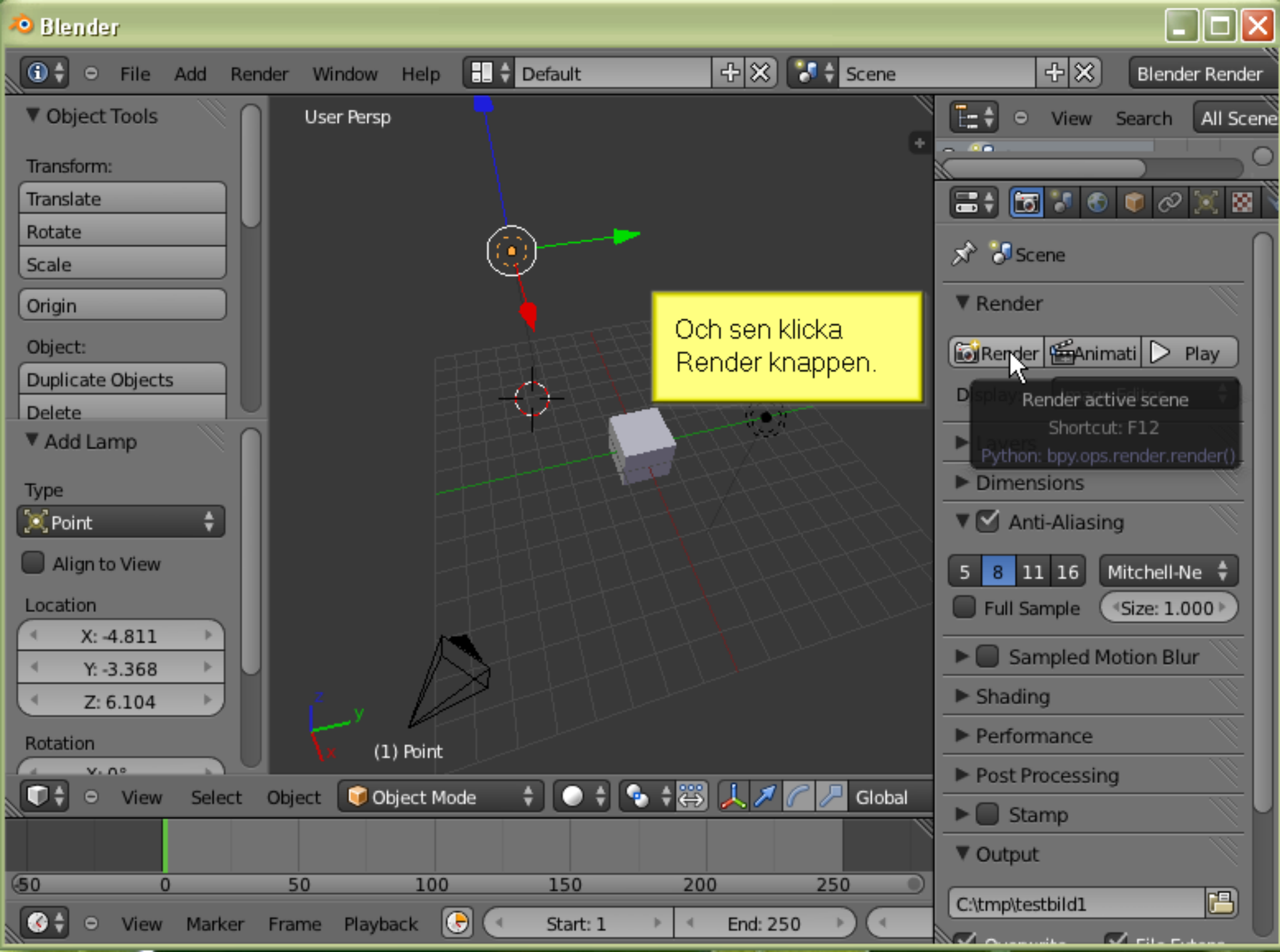
Klicka F12 tangenten för att  
rendera en bild av kameravyn  
och få se resultatet av den  
nya belysningen



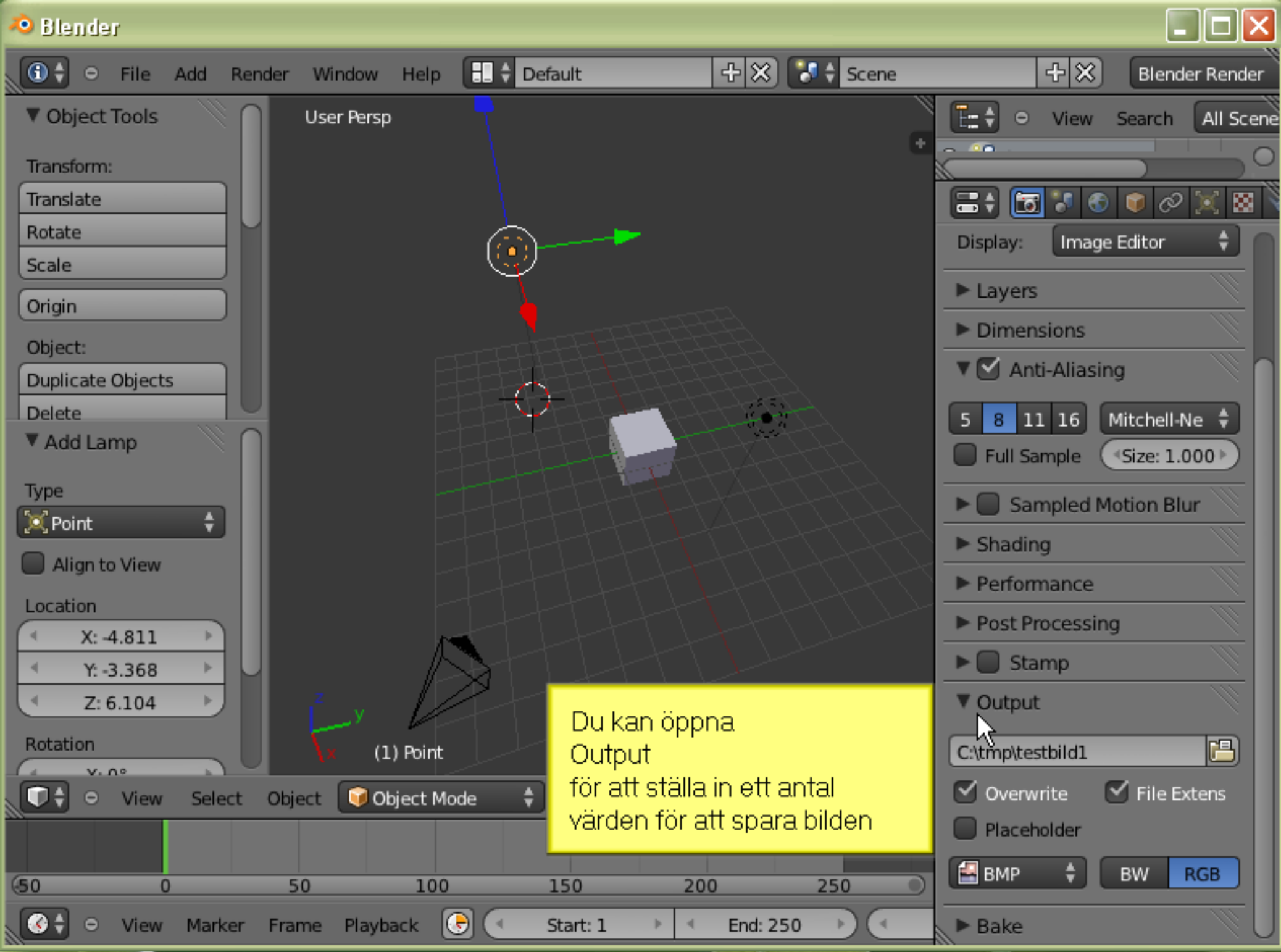
Den mörka sidan på kuben har lättats upp av den nya lampan och scenen har fått en jämnare belysning.

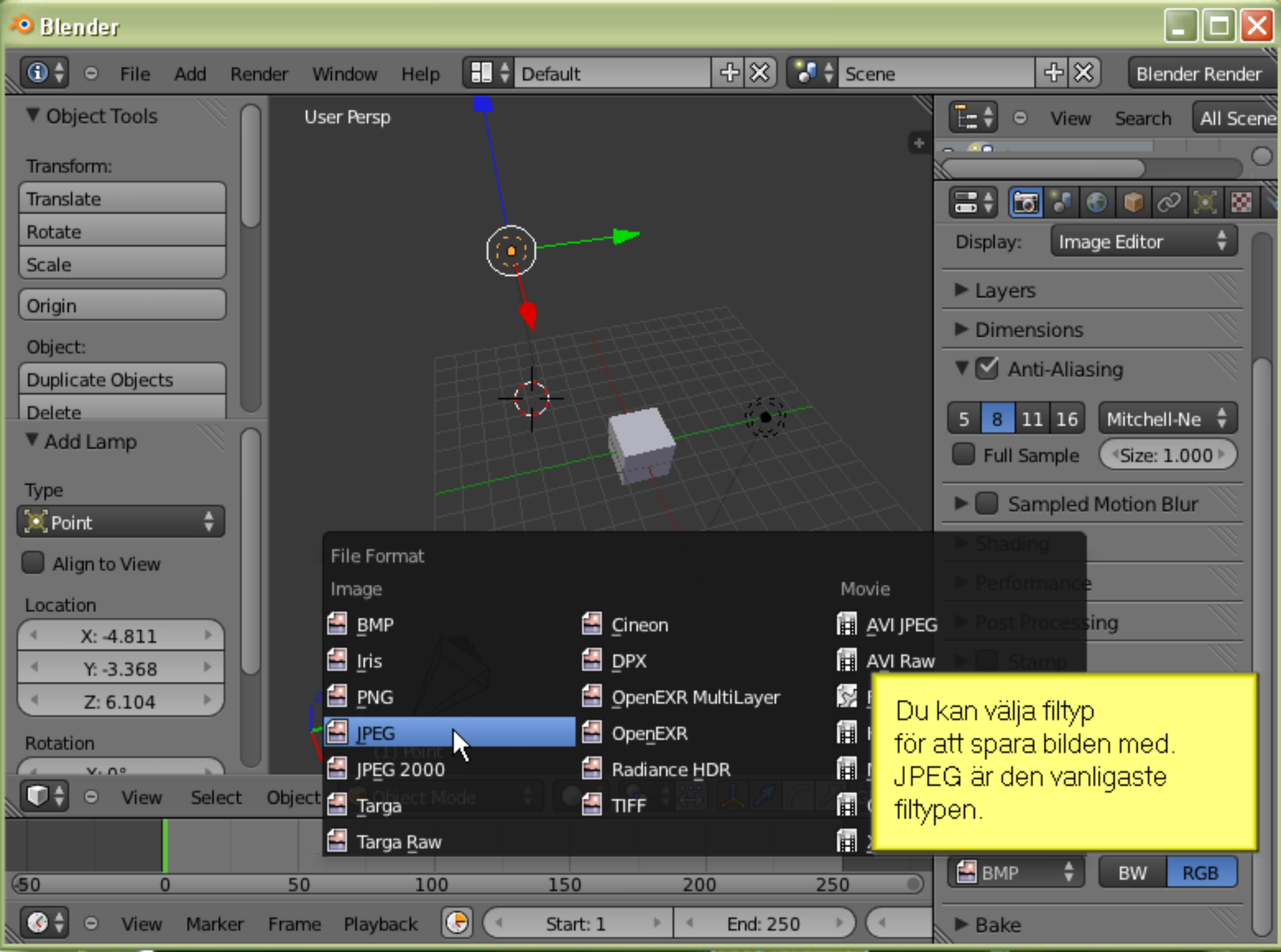
Esc-tangenten för att lämna den renderade vyn och komma tillbaka till scenen.





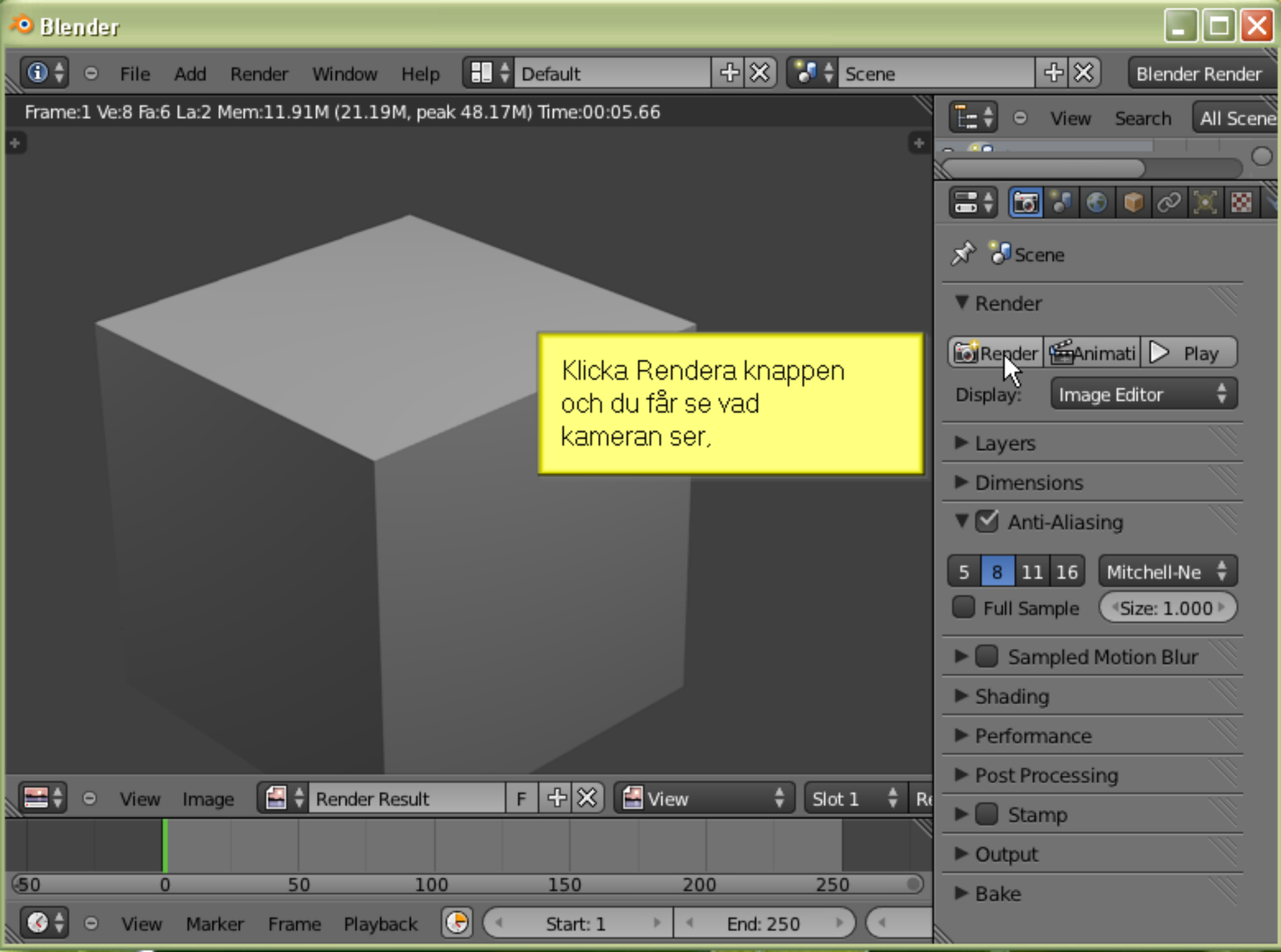
Och sen klicka  
Render knappen.





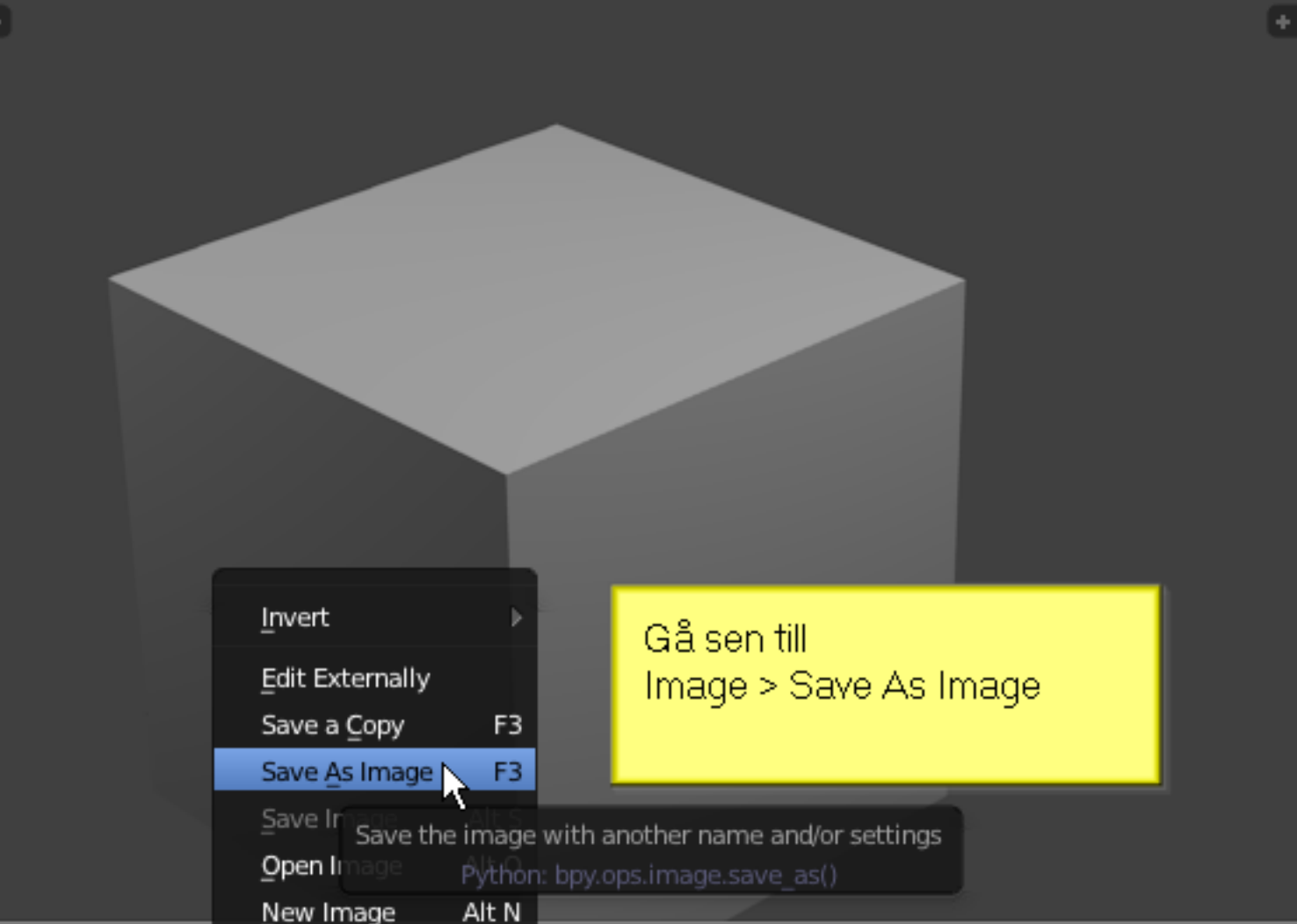
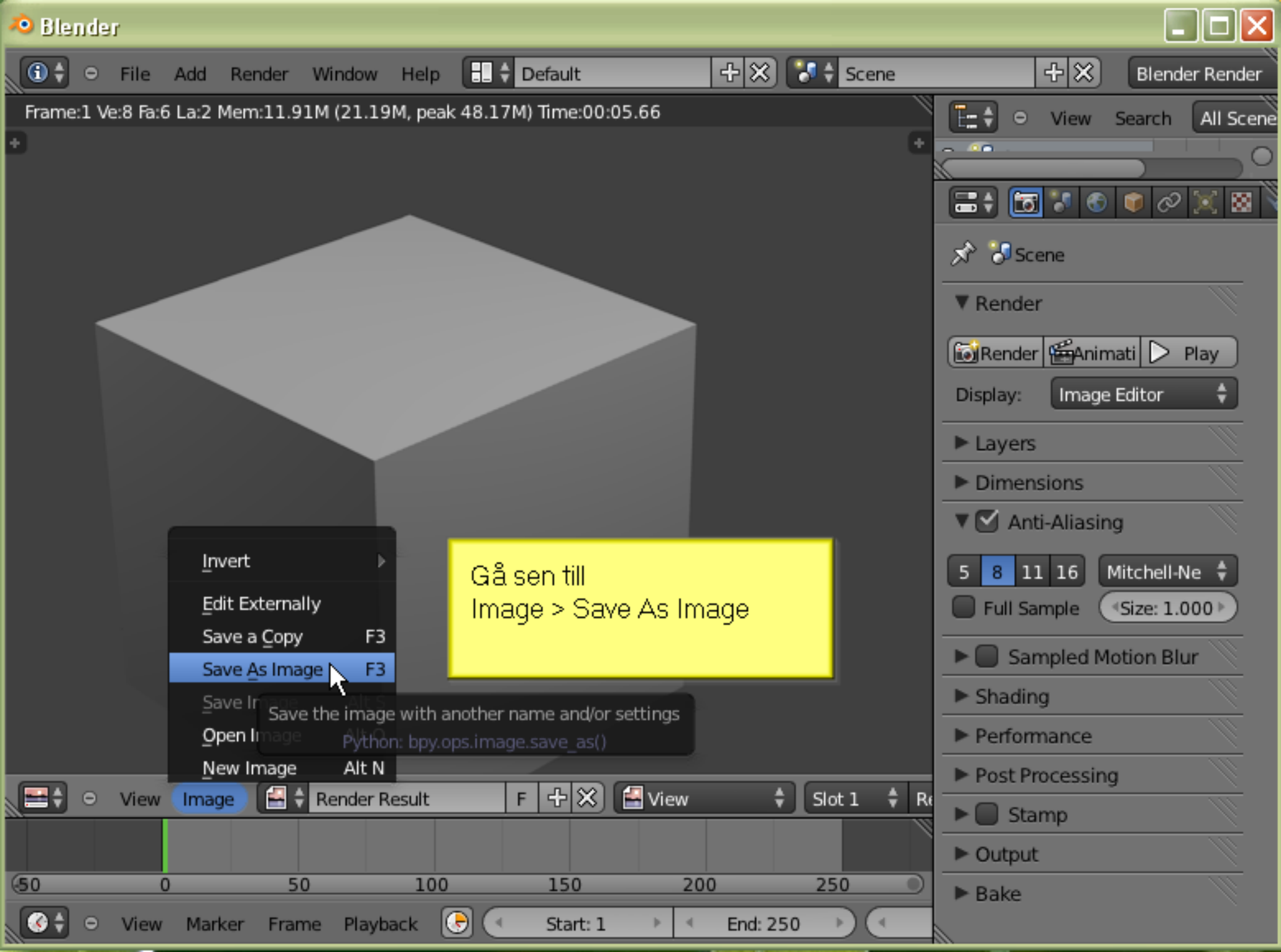
- File Format
- Image
- BMP
  - Iris
  - PNG
  - JPEG
  - JPEG 2000
  - Targa
  - Targa Raw
  - Cineon
  - DPX
  - OpenEXR MultiLayer
  - OpenEXR
  - Radiance HDR
  - TIFF
- Movie
- AVI JPEG
  - AVI Raw

Du kan välja filtyp för att spara bilden med. JPEG är den vanligaste filtypen.



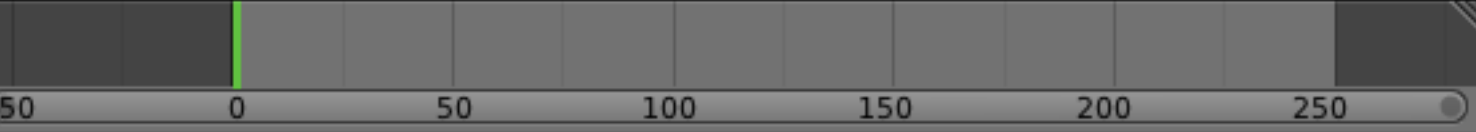
Klicka Rendera knappen  
och du får se vad  
kameran ser.





- Invert
- Edit Externally
- Save a Copy F3
- Save As Image F3
- Save Image
- Open Image Python: bpy.ops.image.save\_as()
- New Image Alt N

Gå sen till  
Image > Save As Image



View Search All Scene

Scene

Render

Render Animati Play

Display: Image Editor

Layers

Dimensions

Anti-Aliasing

5 8 11 16 Mitchell-Ne

Full Sample Size: 1.000

Sampled Motion Blur

Shading

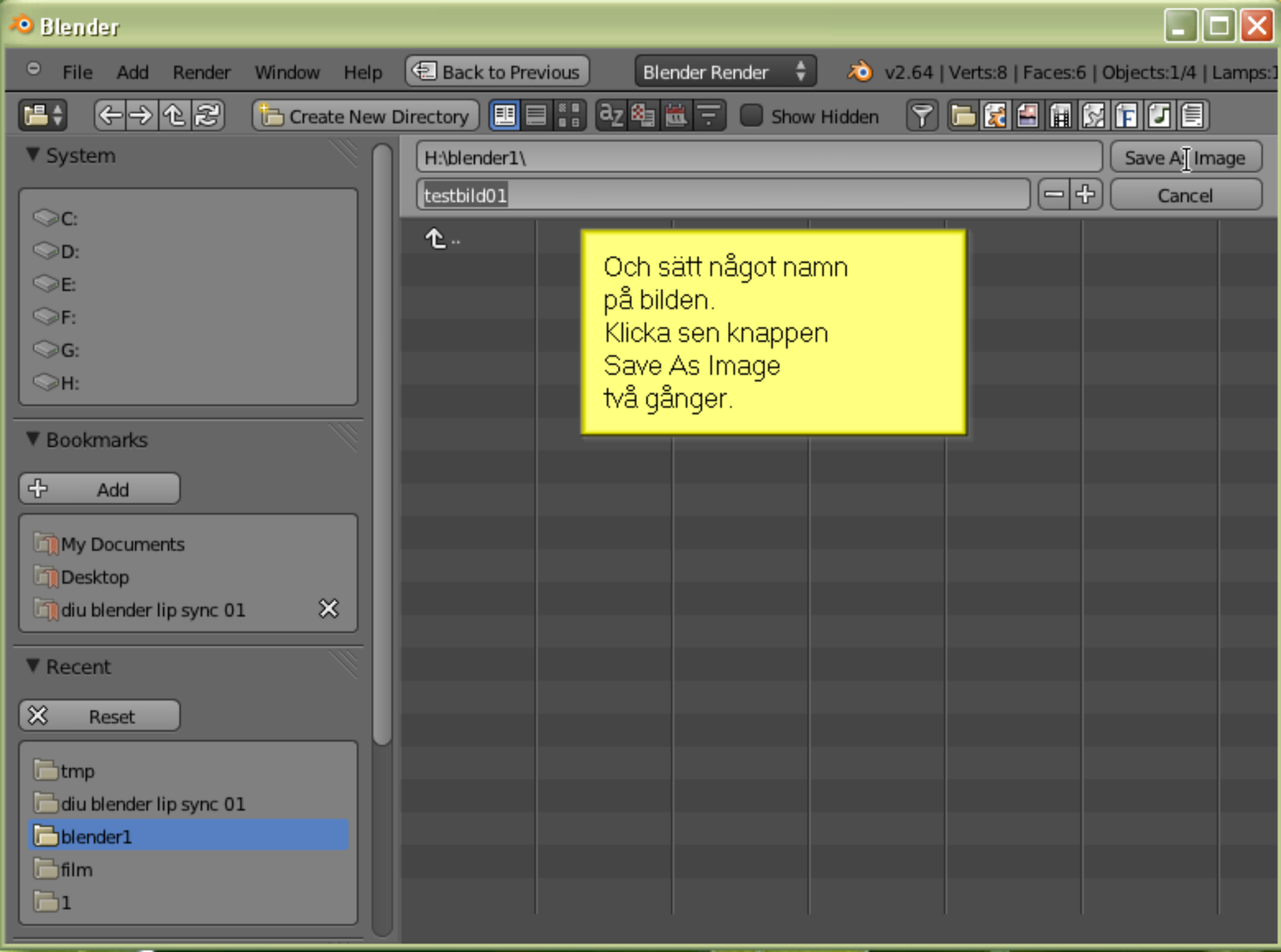
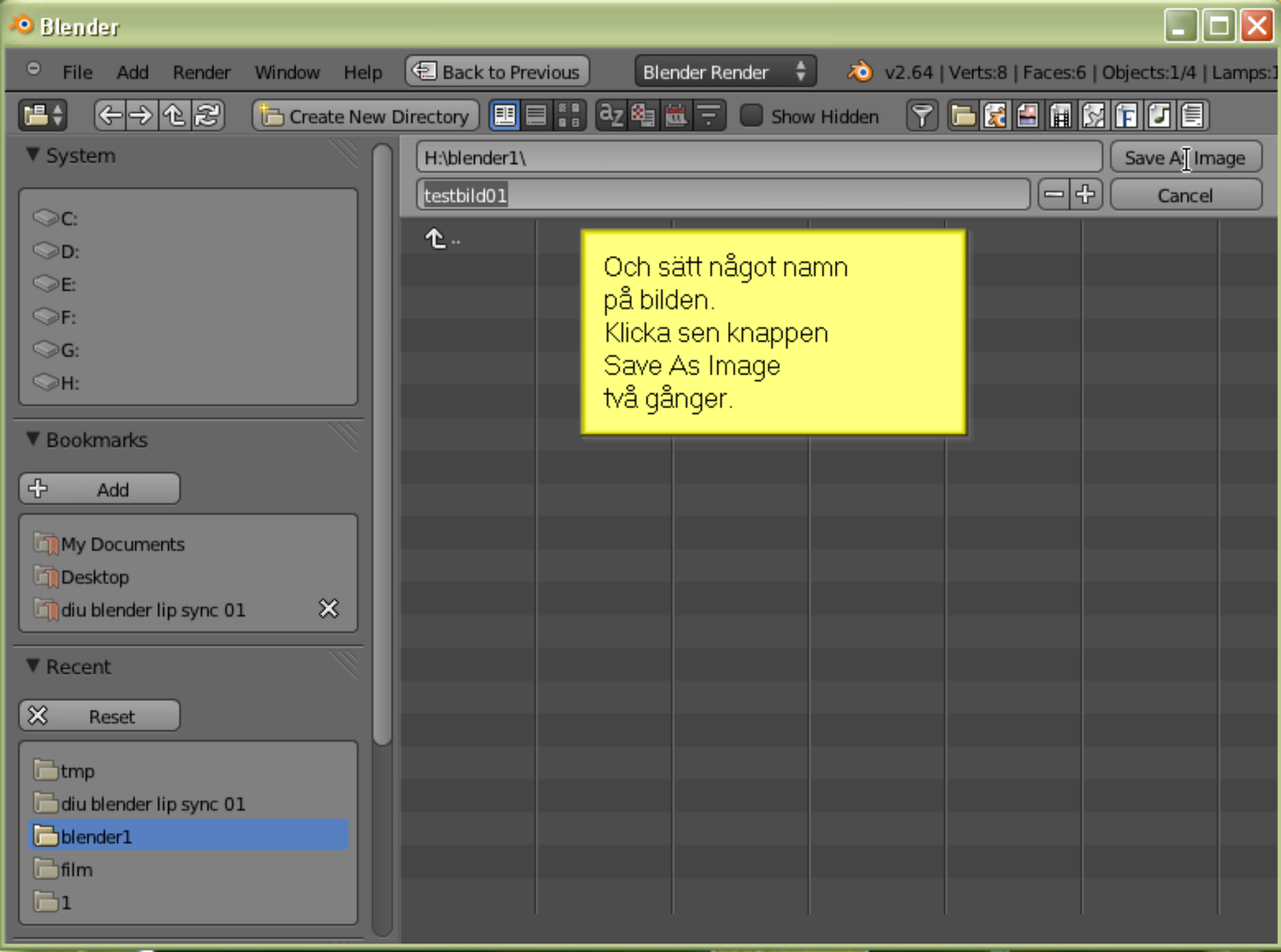
Performance

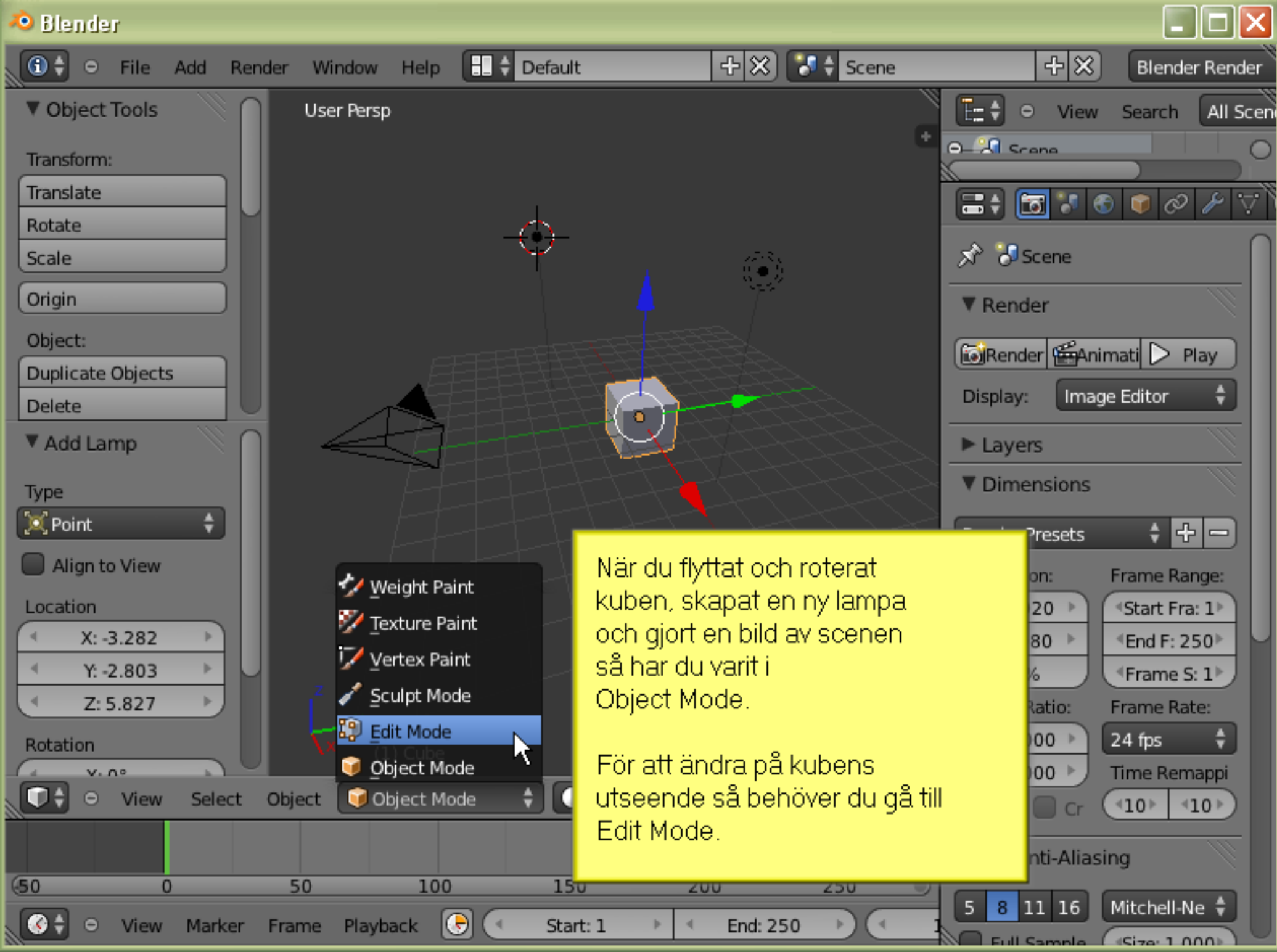
Post Processing

Stamp

Output

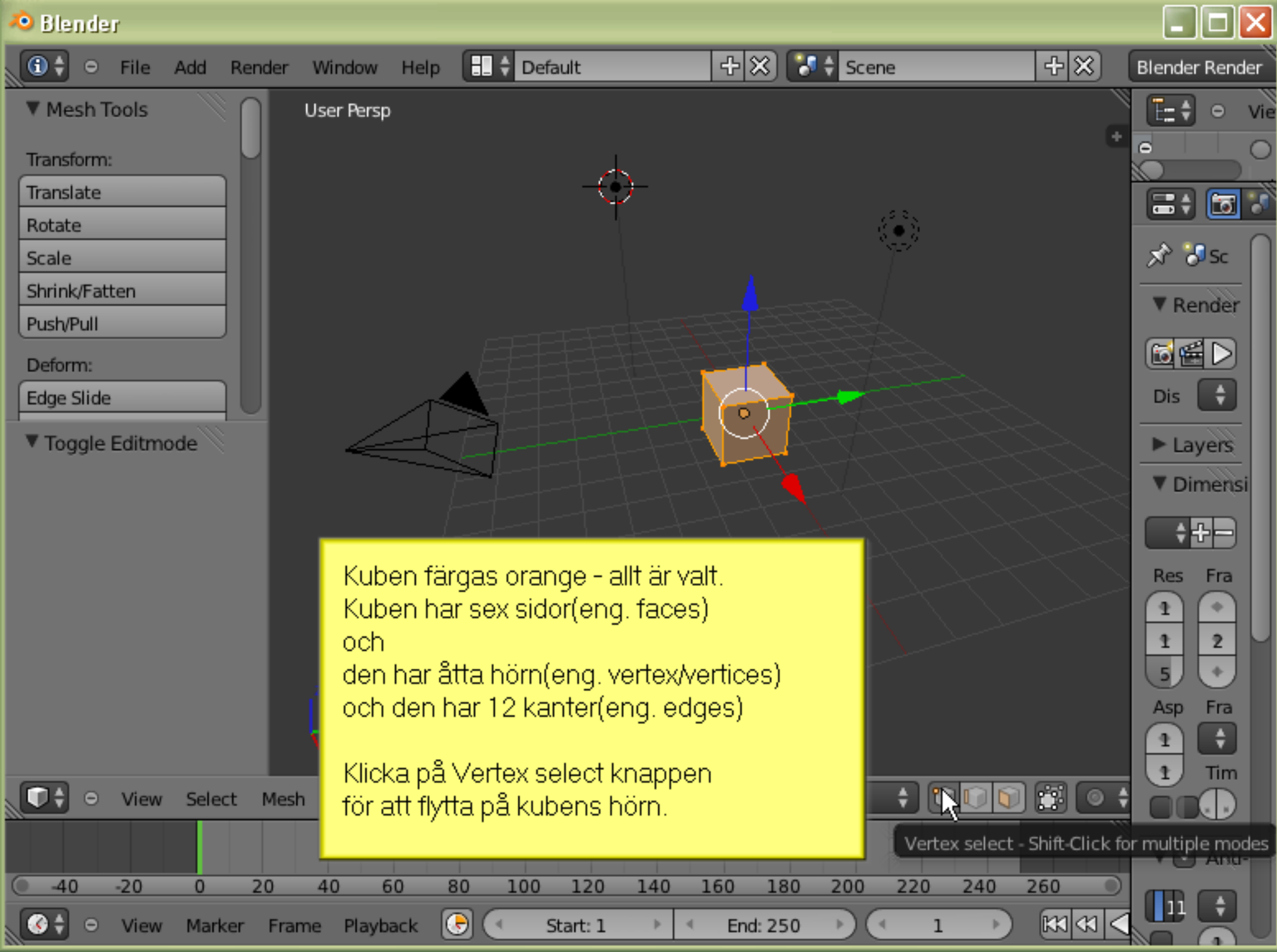
Bake





När du flyttat och roterat kuben, skapat en ny lampa och gjort en bild av scenen så har du varit i Object Mode.

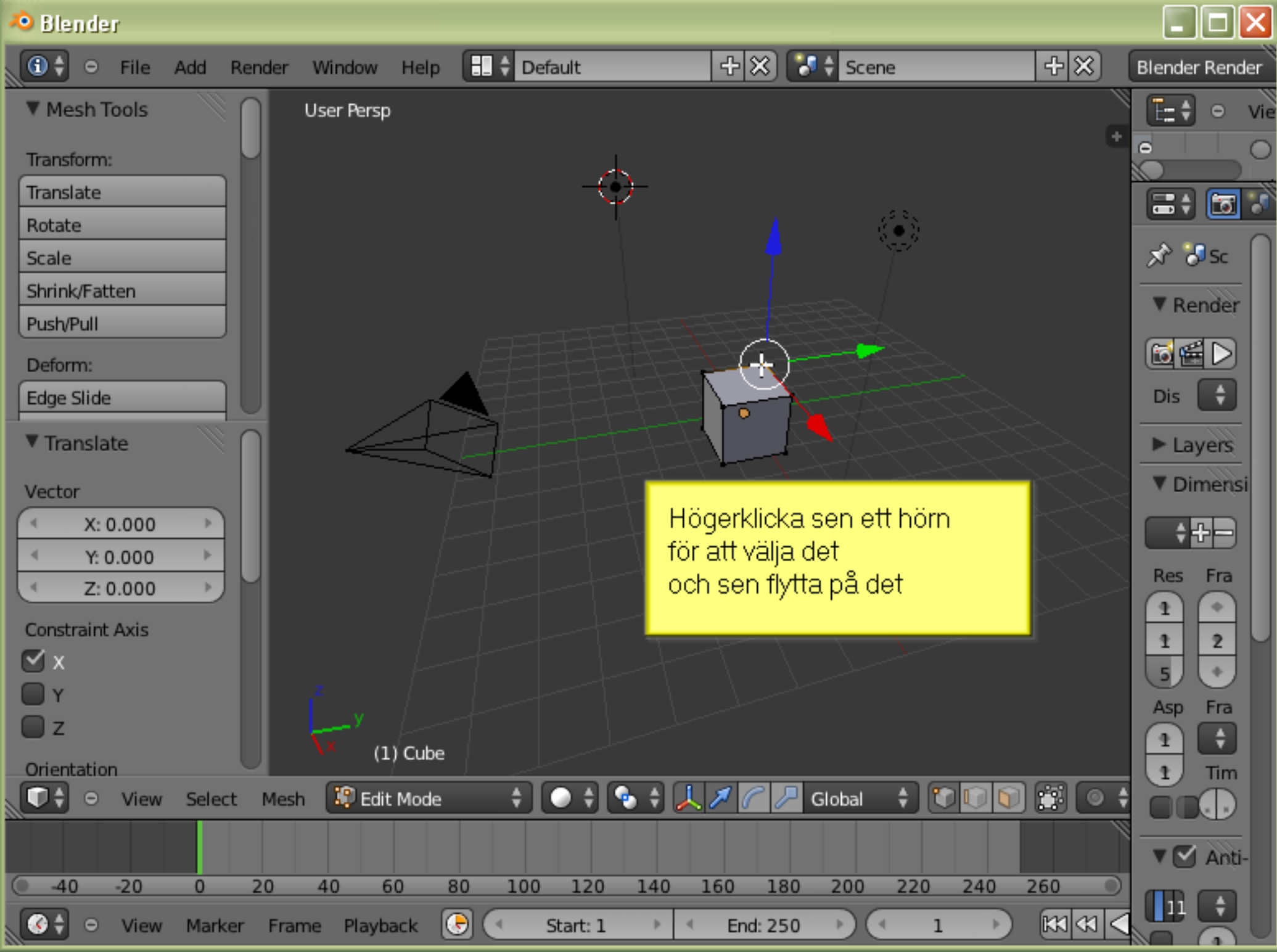
För att ändra på kubens utseende så behöver du gå till Edit Mode.

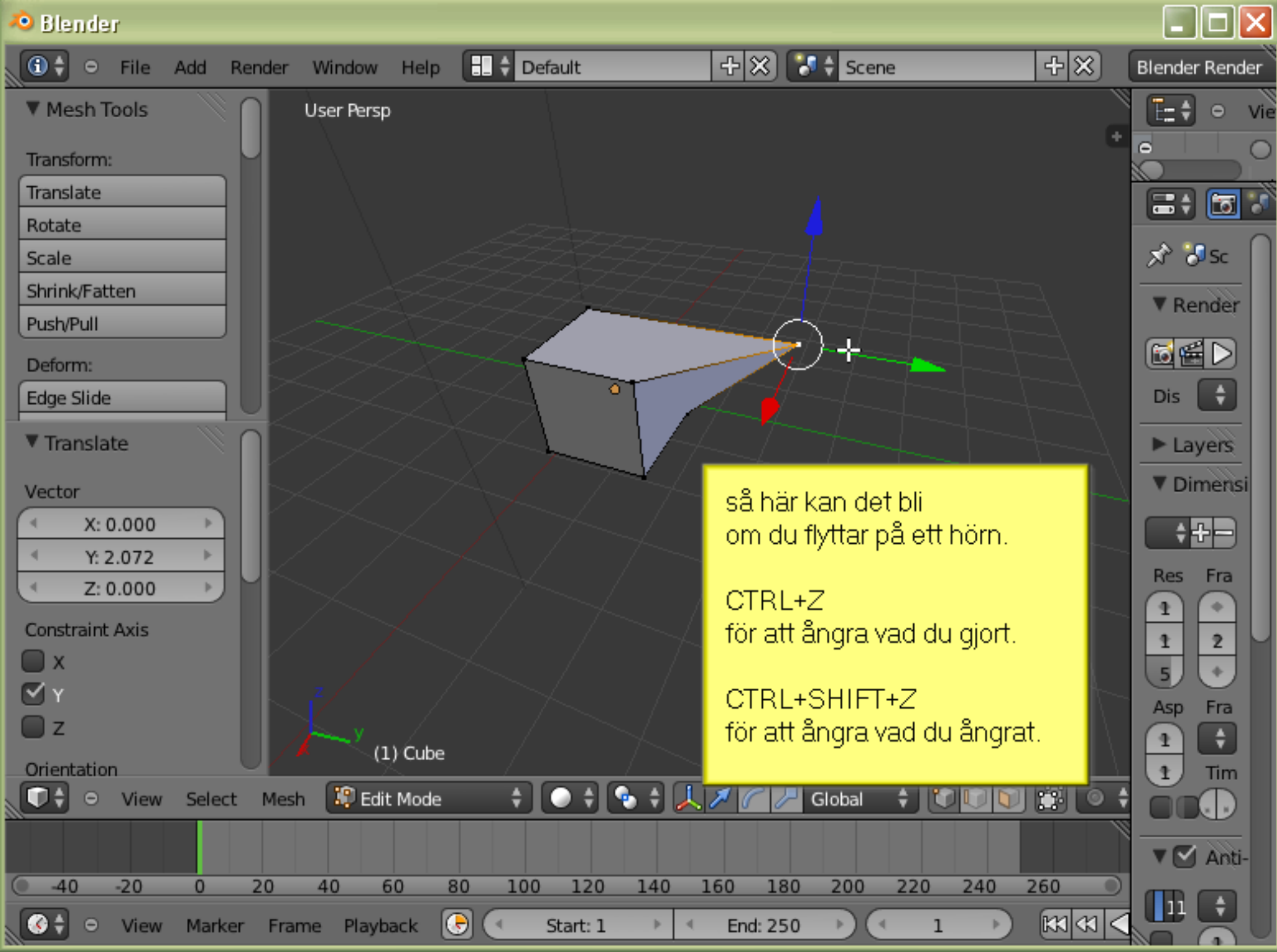


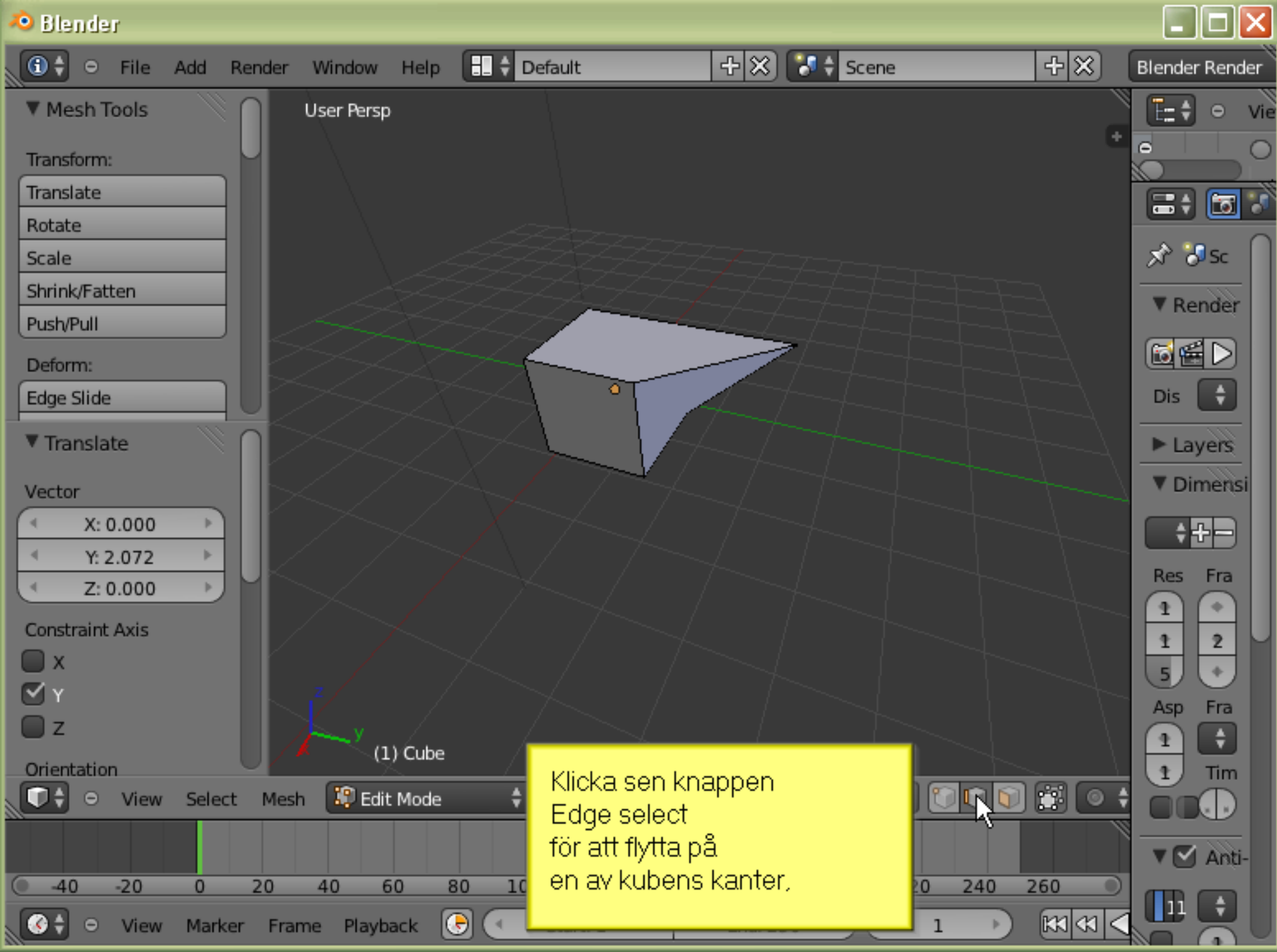
Kuben färgas orange - allt är valt.  
Kuben har sex sidor(eng. faces)  
och  
den har åtta hörn(eng. vertex/vertices)  
och den har 12 kanter(eng. edges)

Klicka på Vertex select knappen  
för att flytta på kubens hörn.

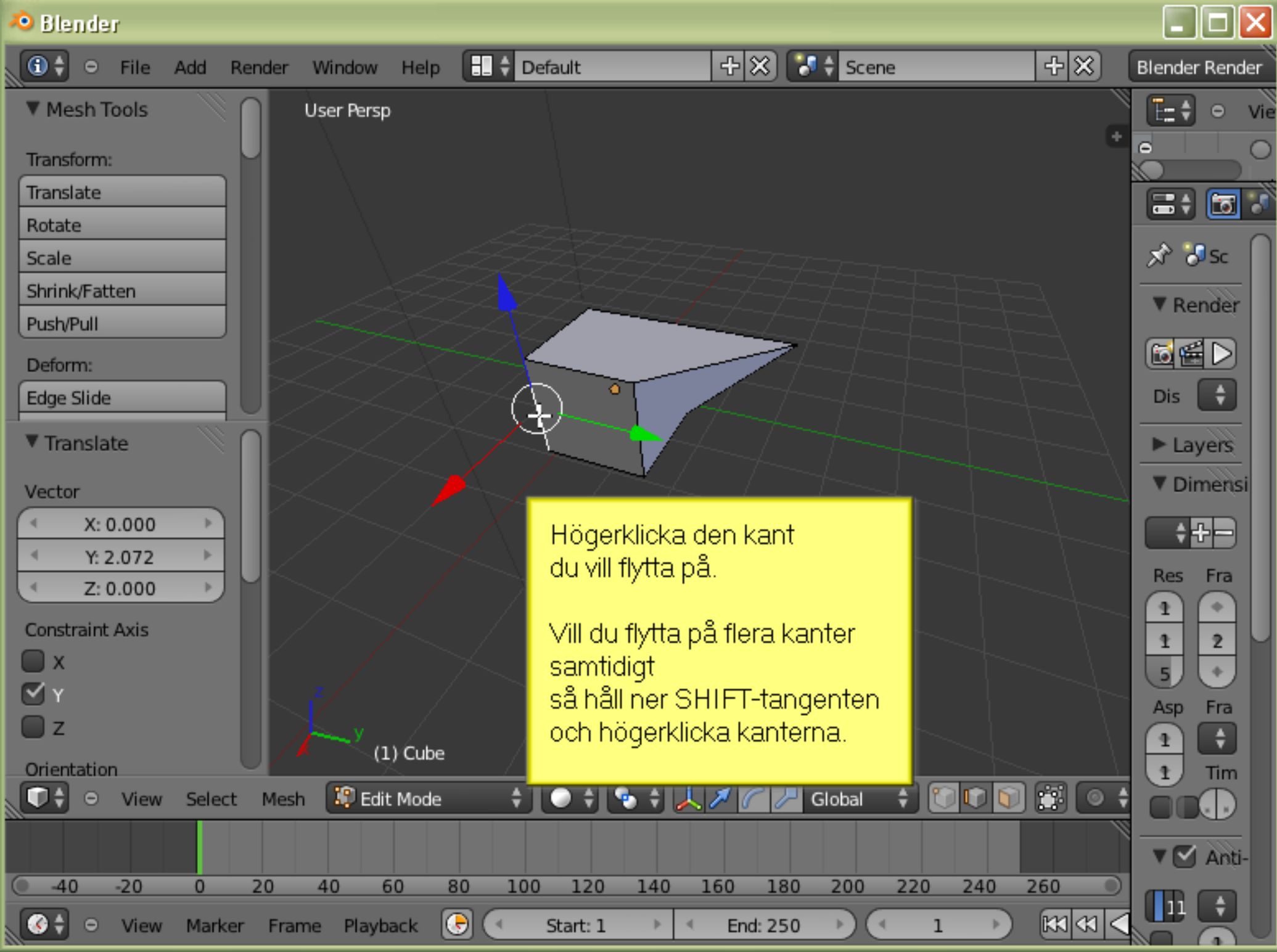
Vertex select - Shift-Click for multiple modes

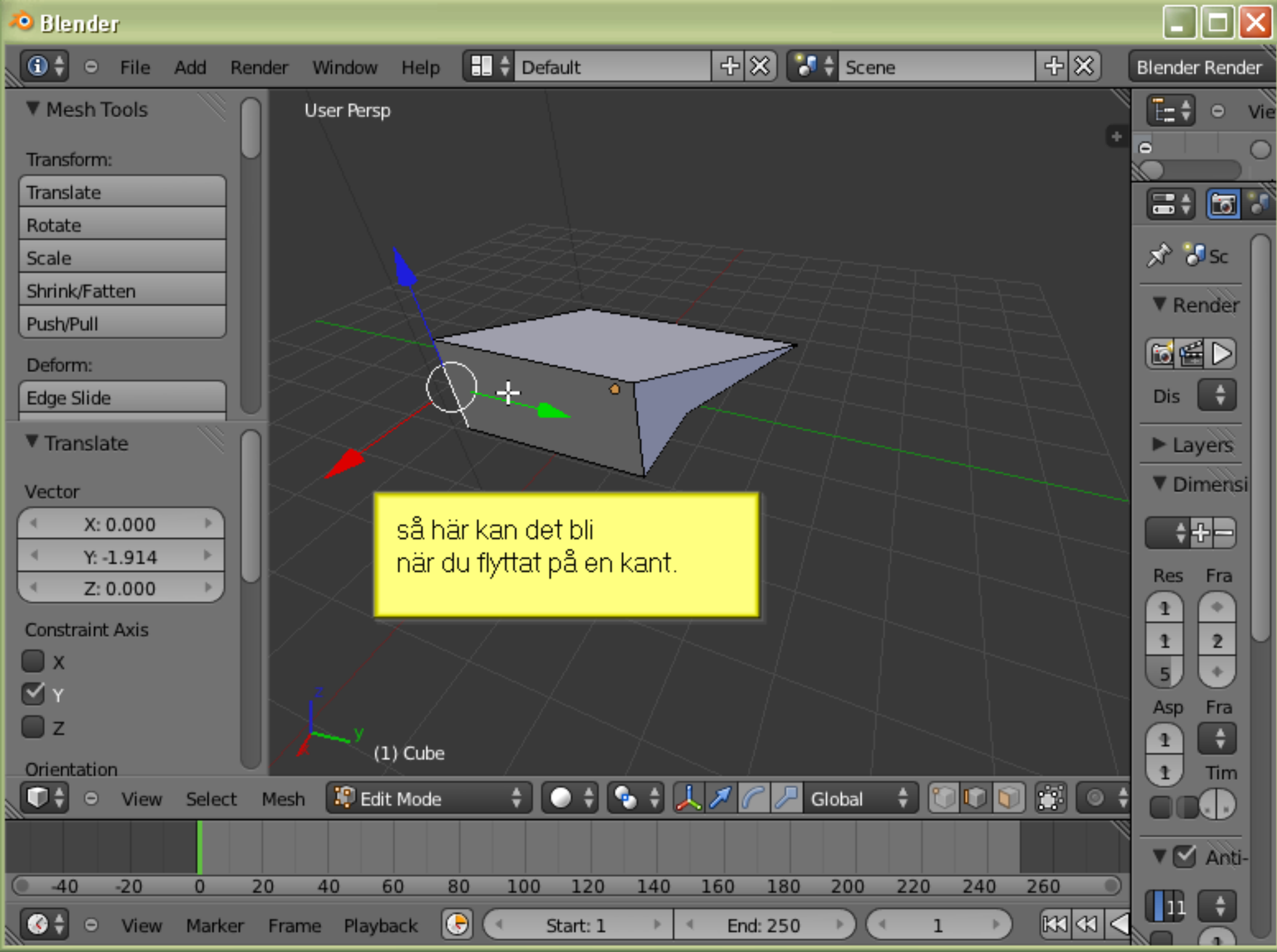


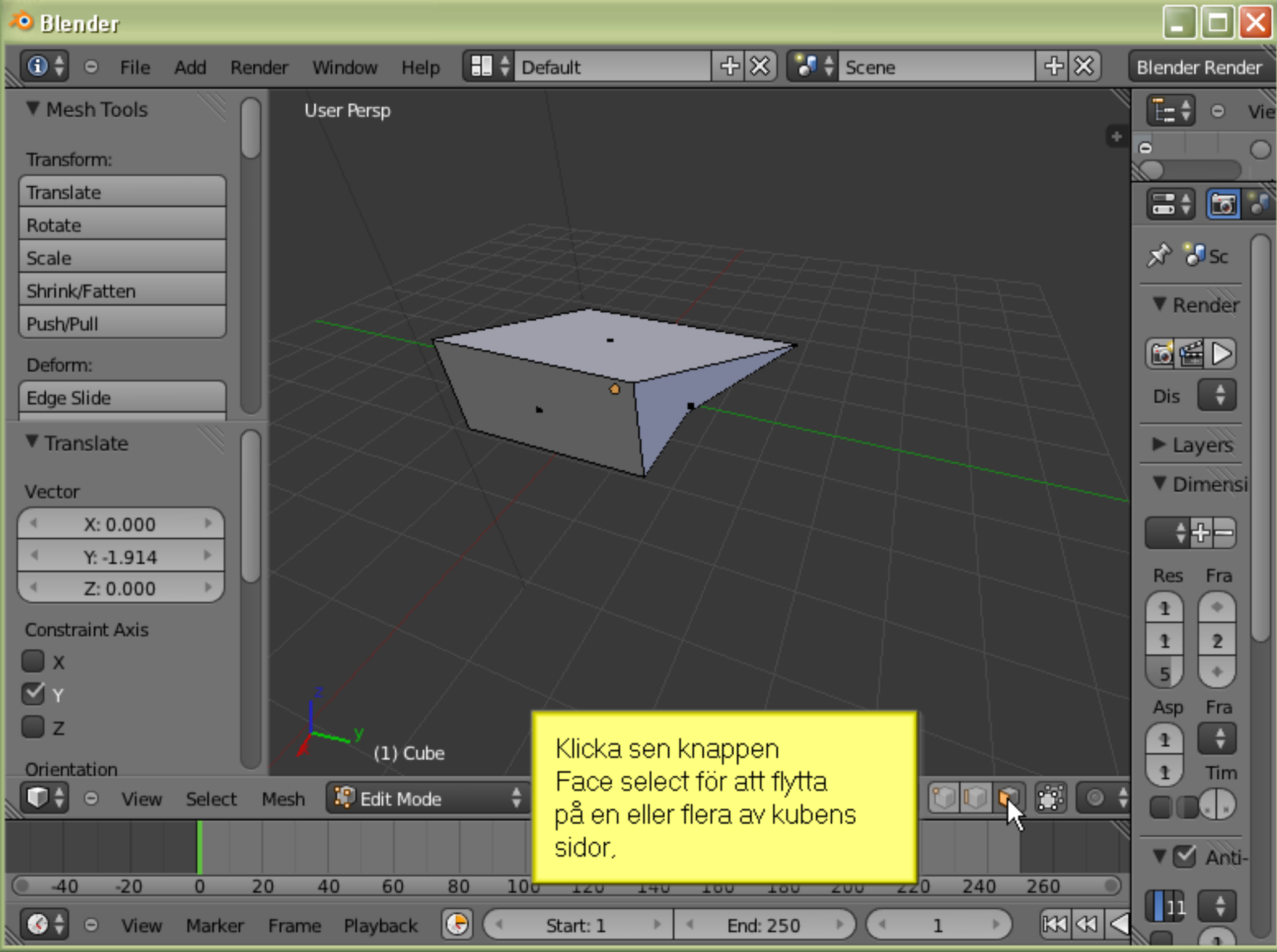


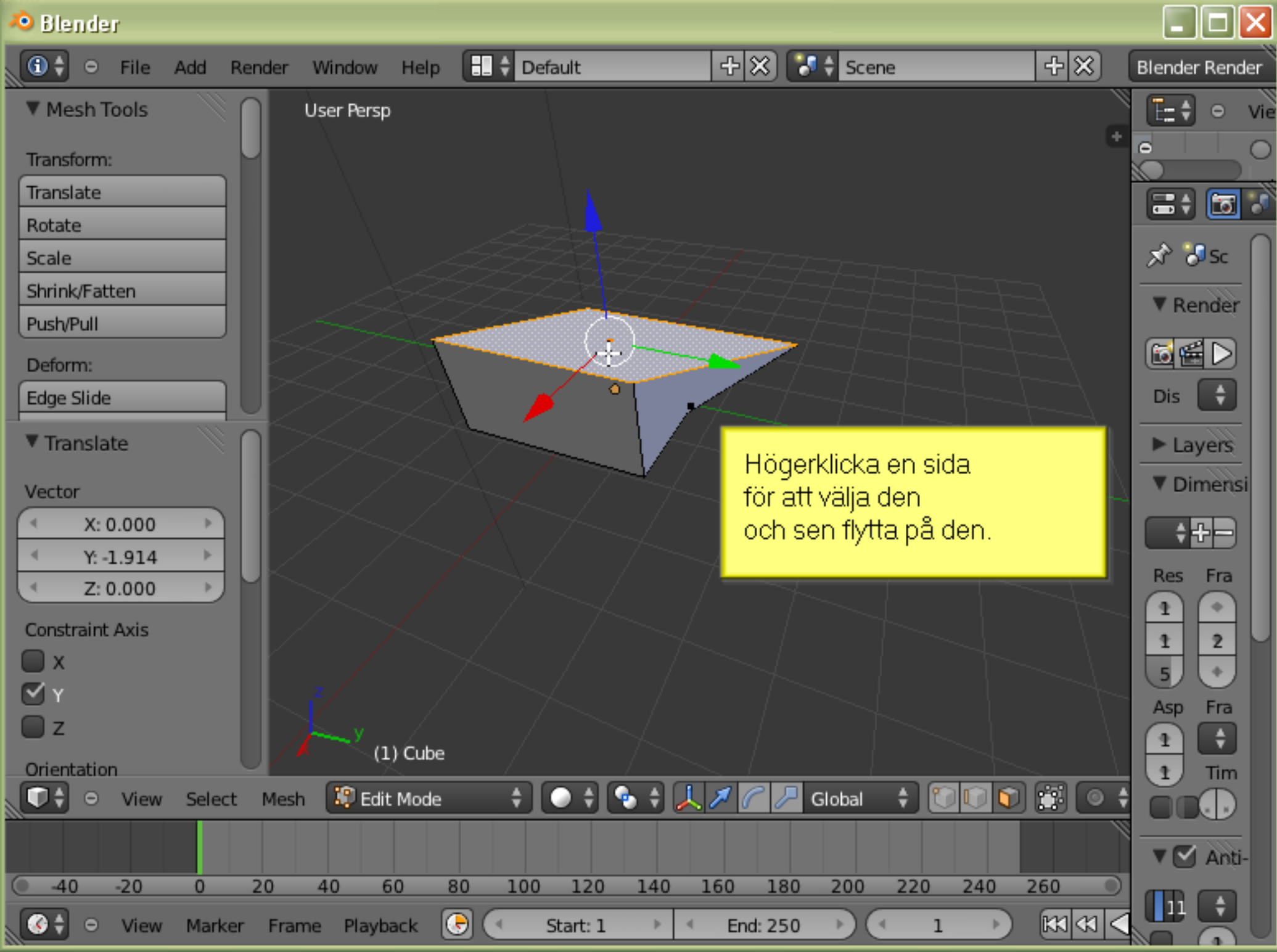


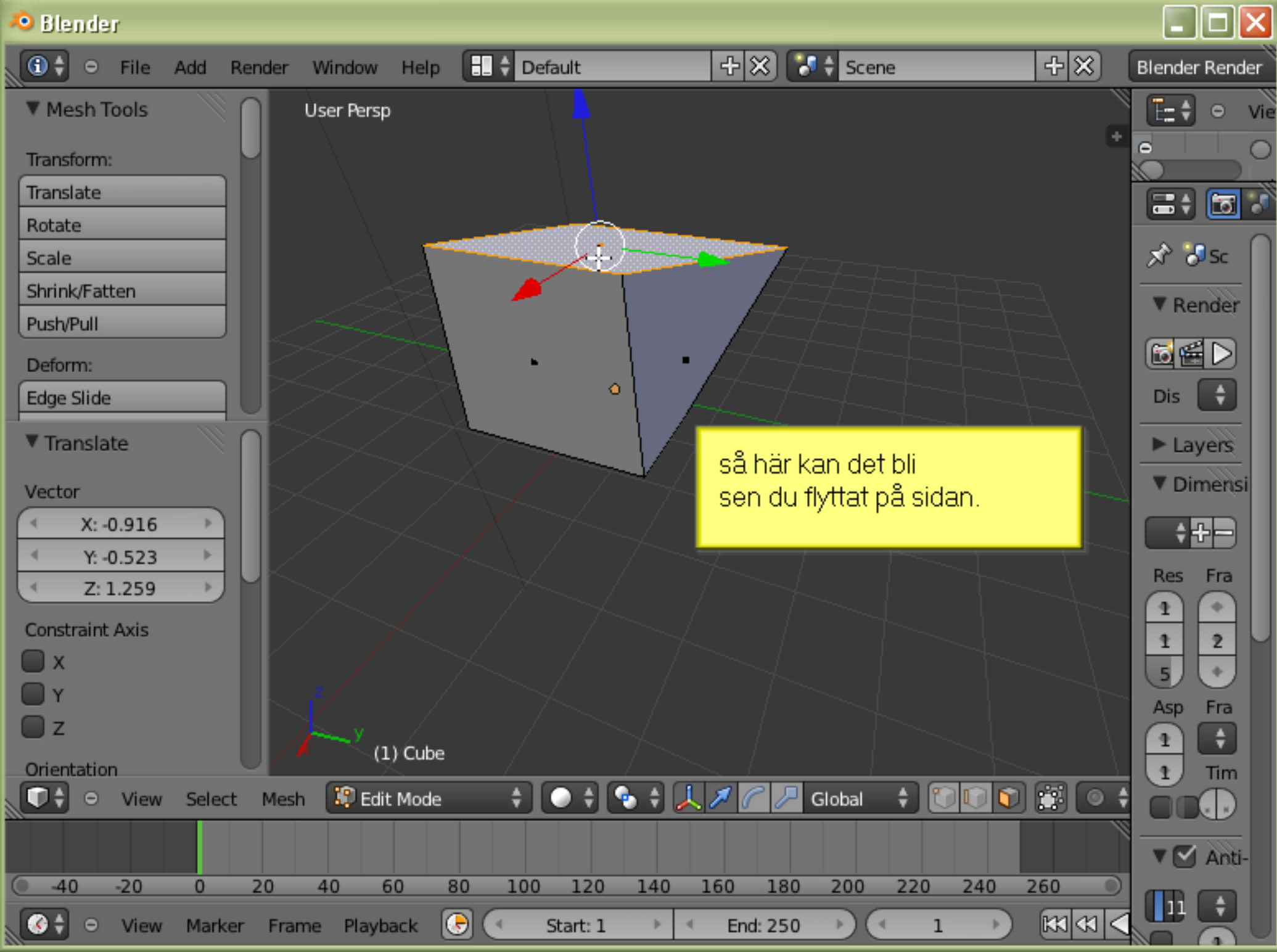


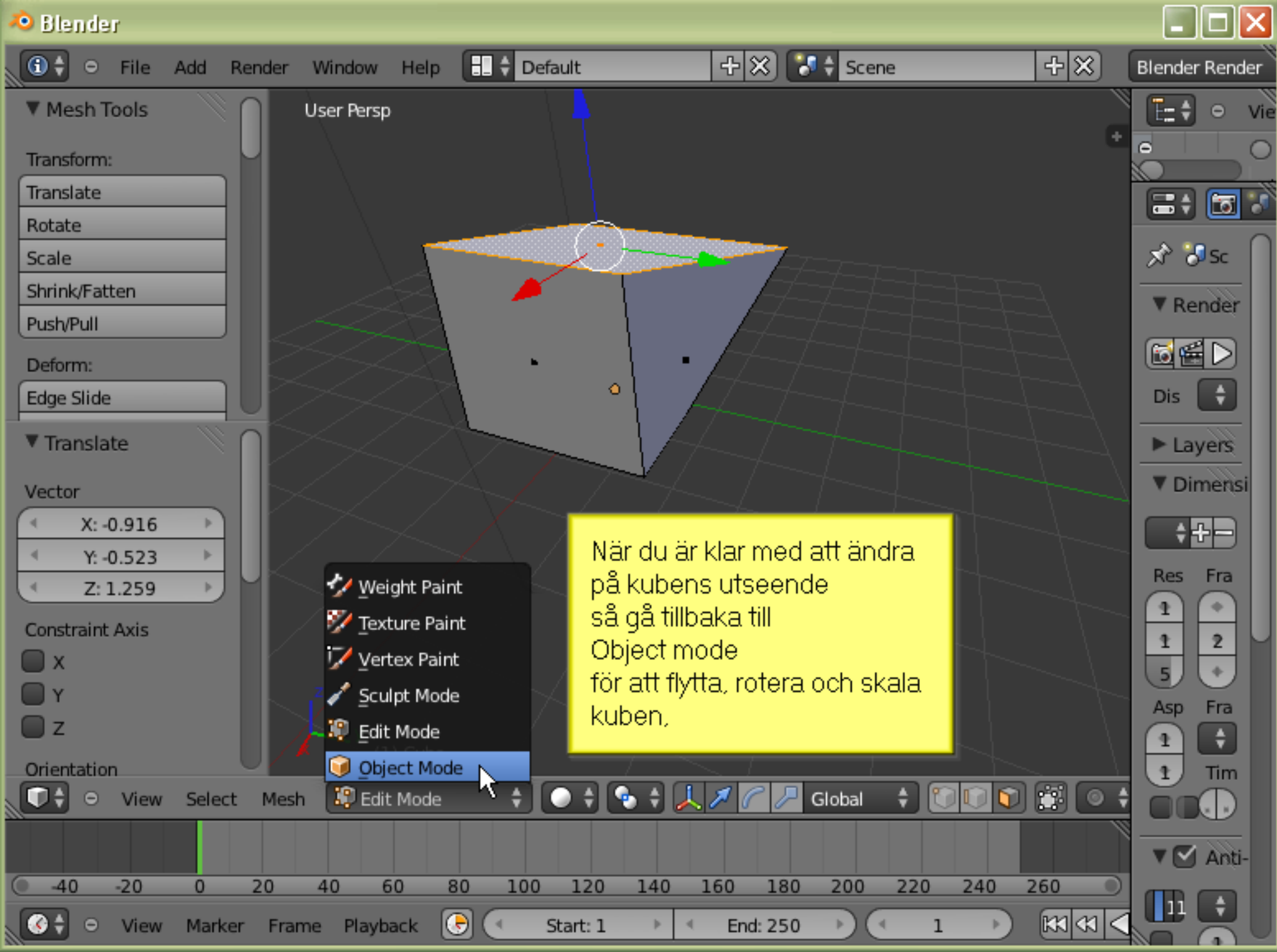




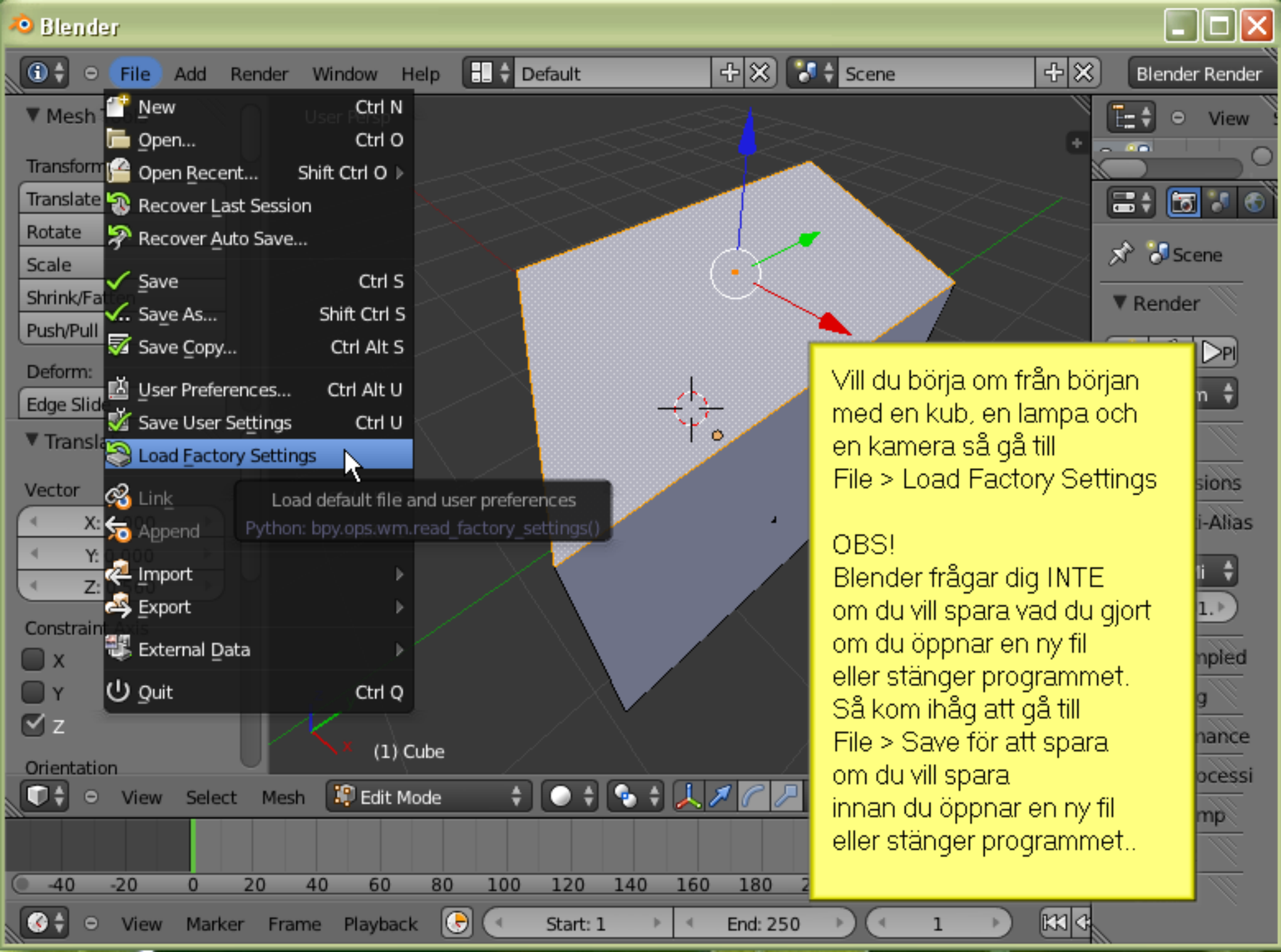








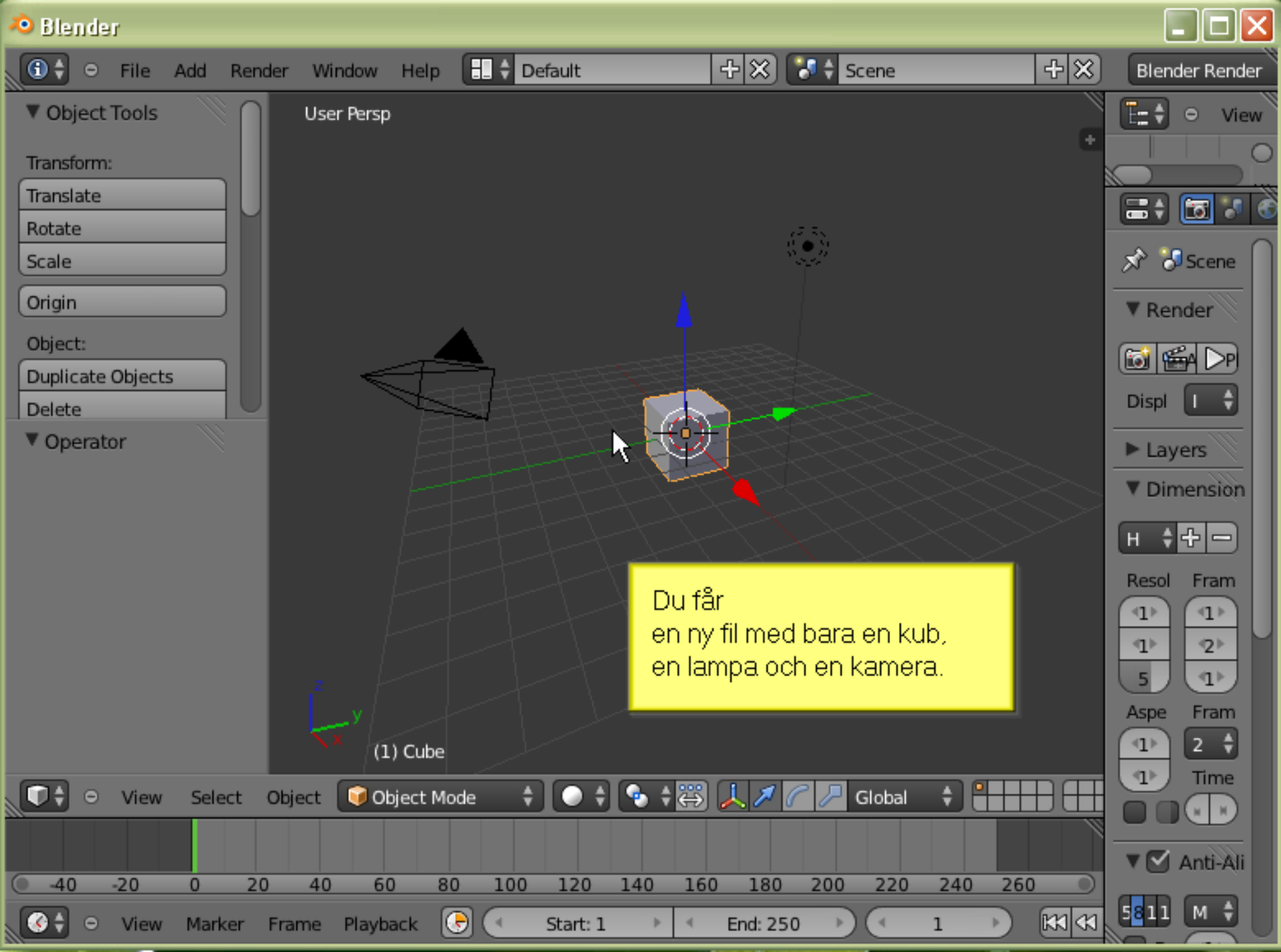


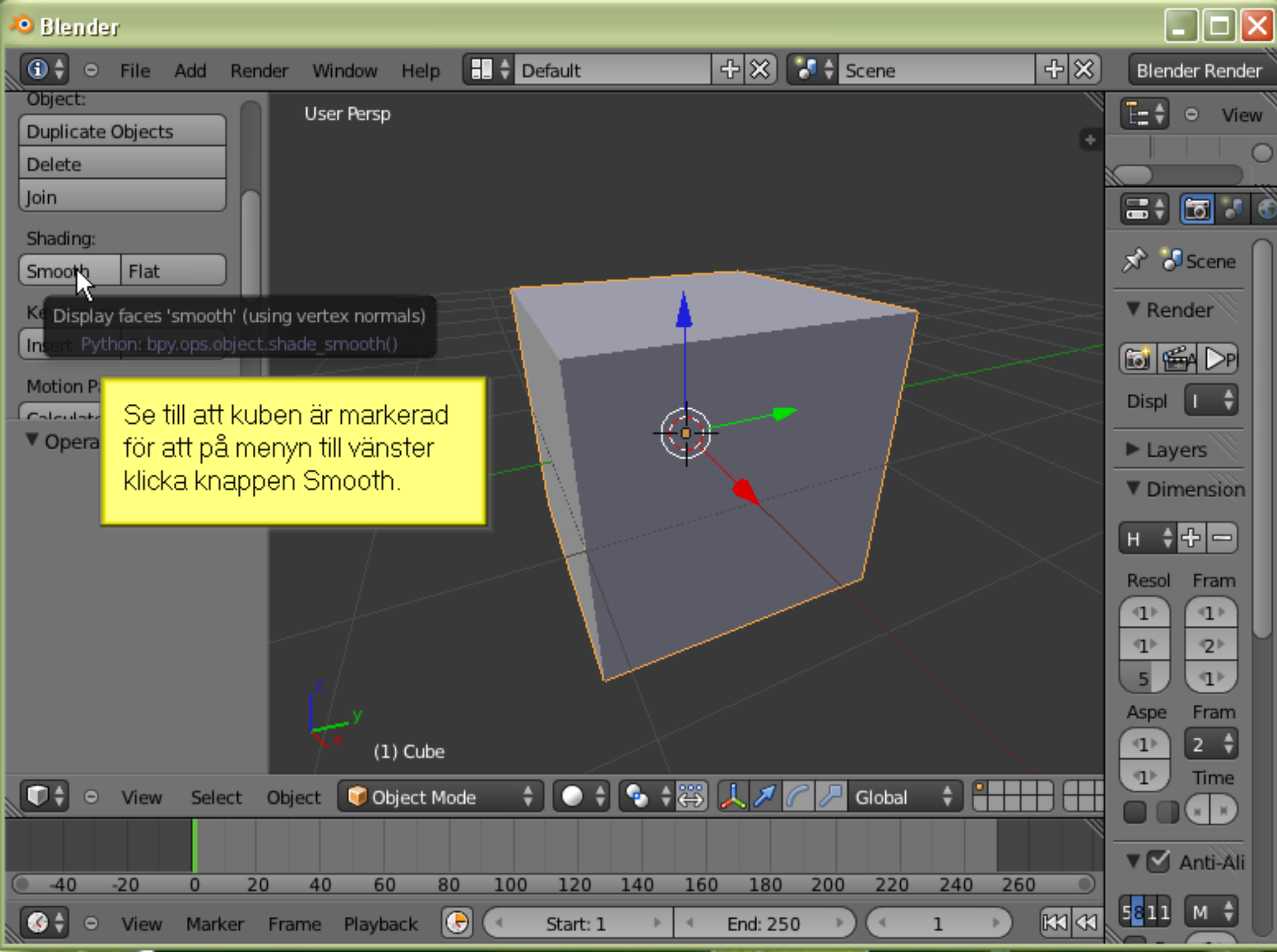


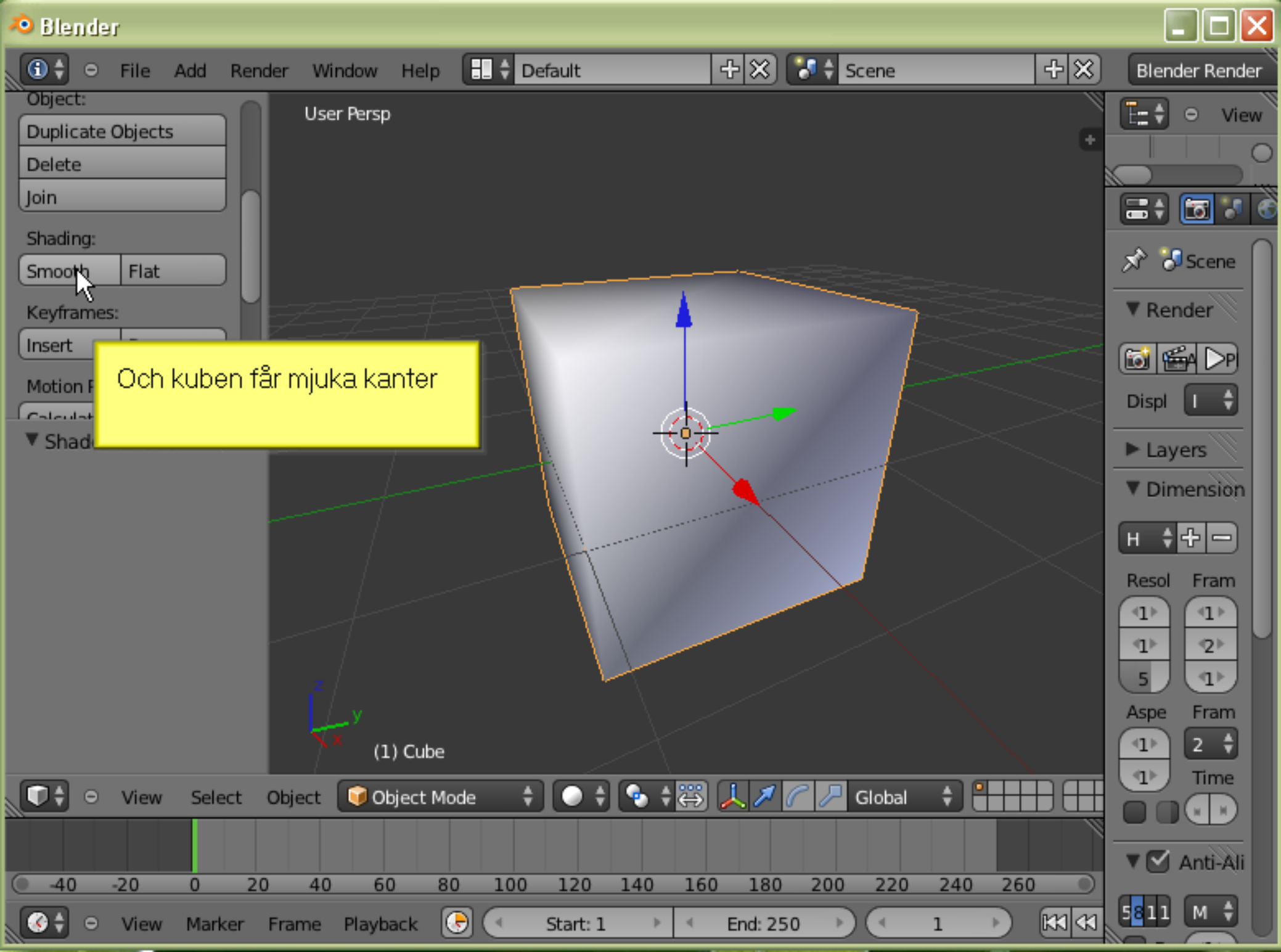
Vill du börja om från början med en kub, en lampa och en kamera så gå till File > Load Factory Settings

OBS!  
Blender frågar dig INTE om du vill spara vad du gjort om du öppnar en ny fil eller stänger programmet. Så kom ihåg att gå till File > Save för att spara om du vill spara innan du öppnar en ny fil eller stänger programmet..

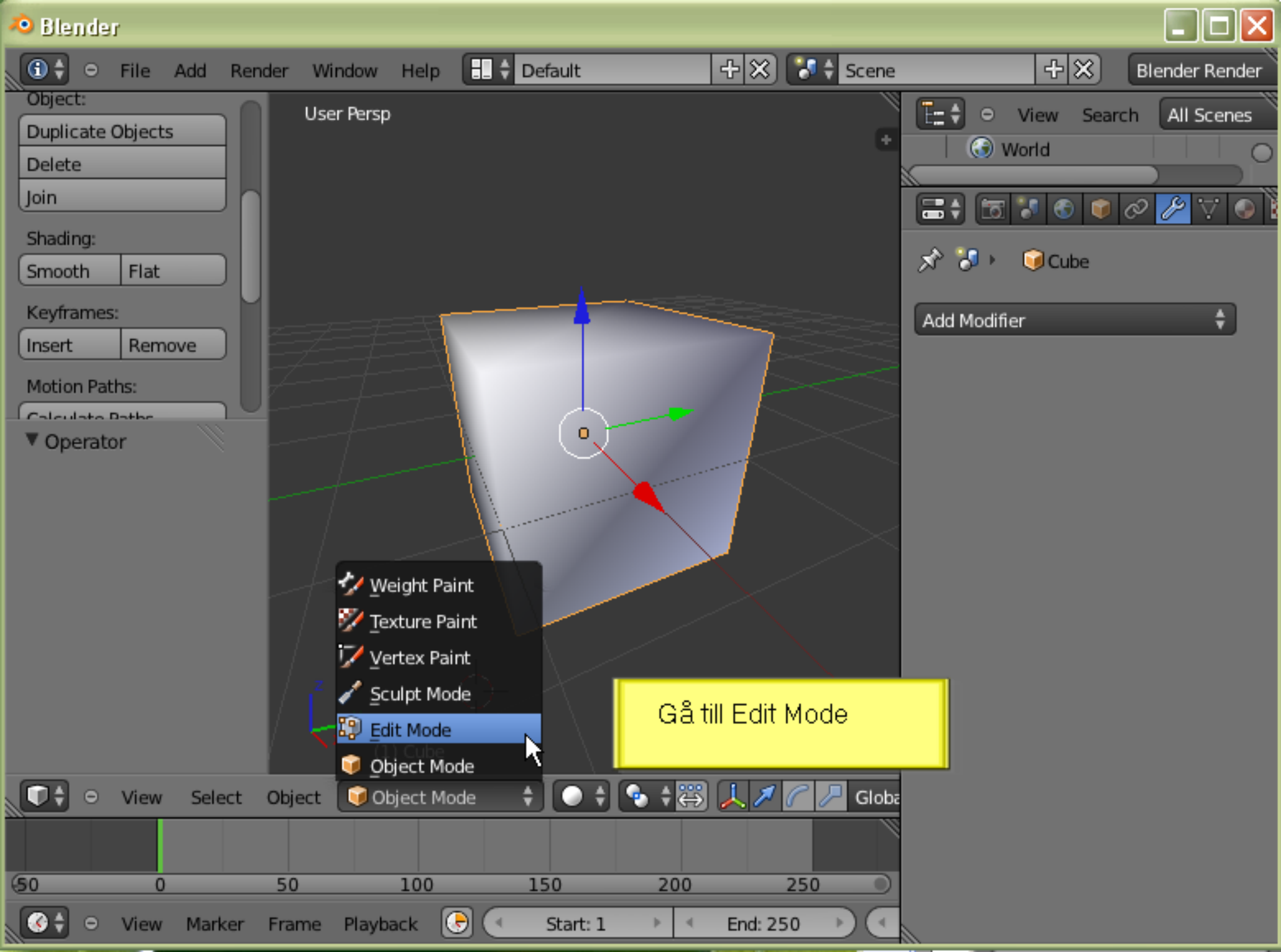


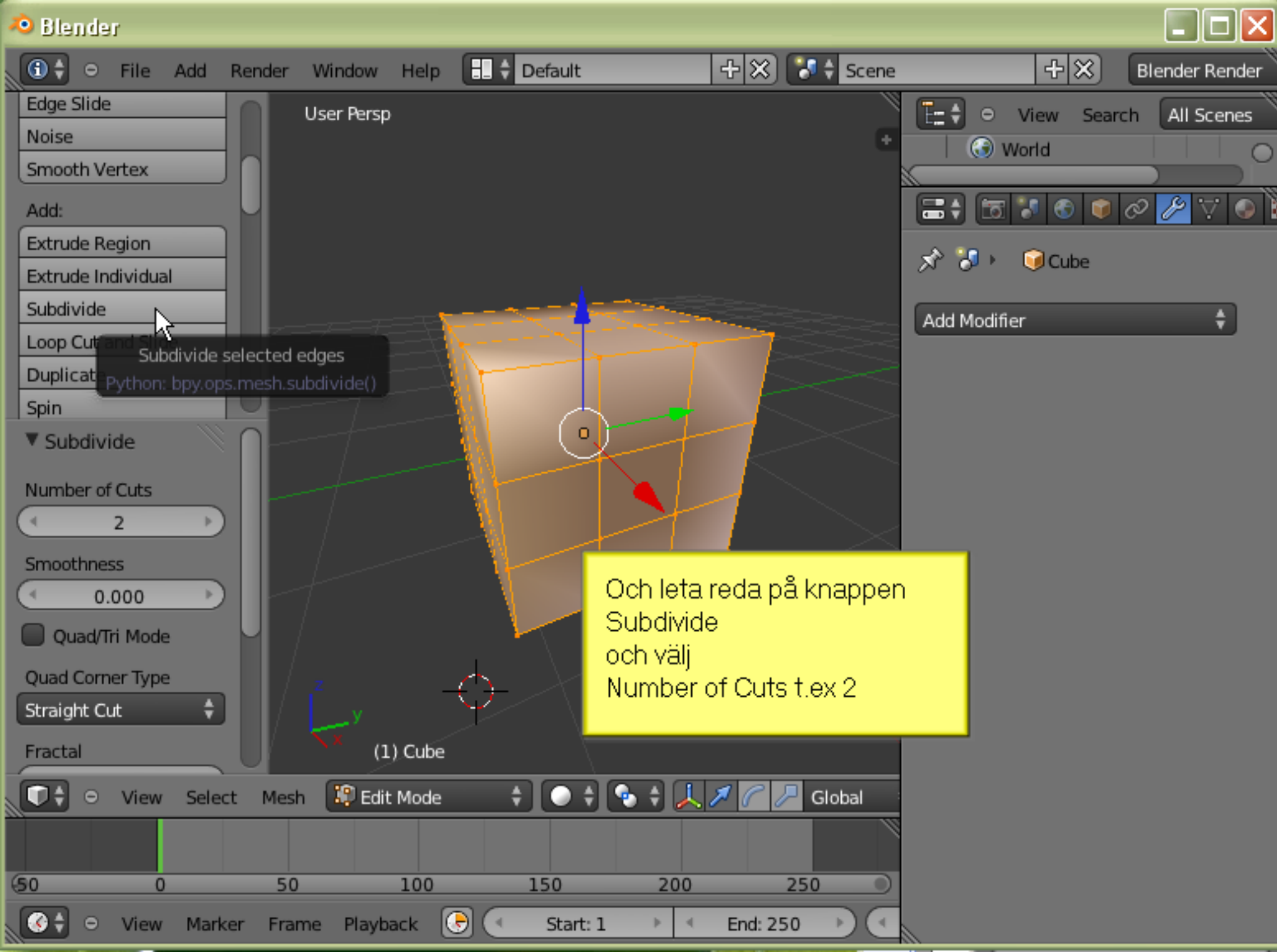


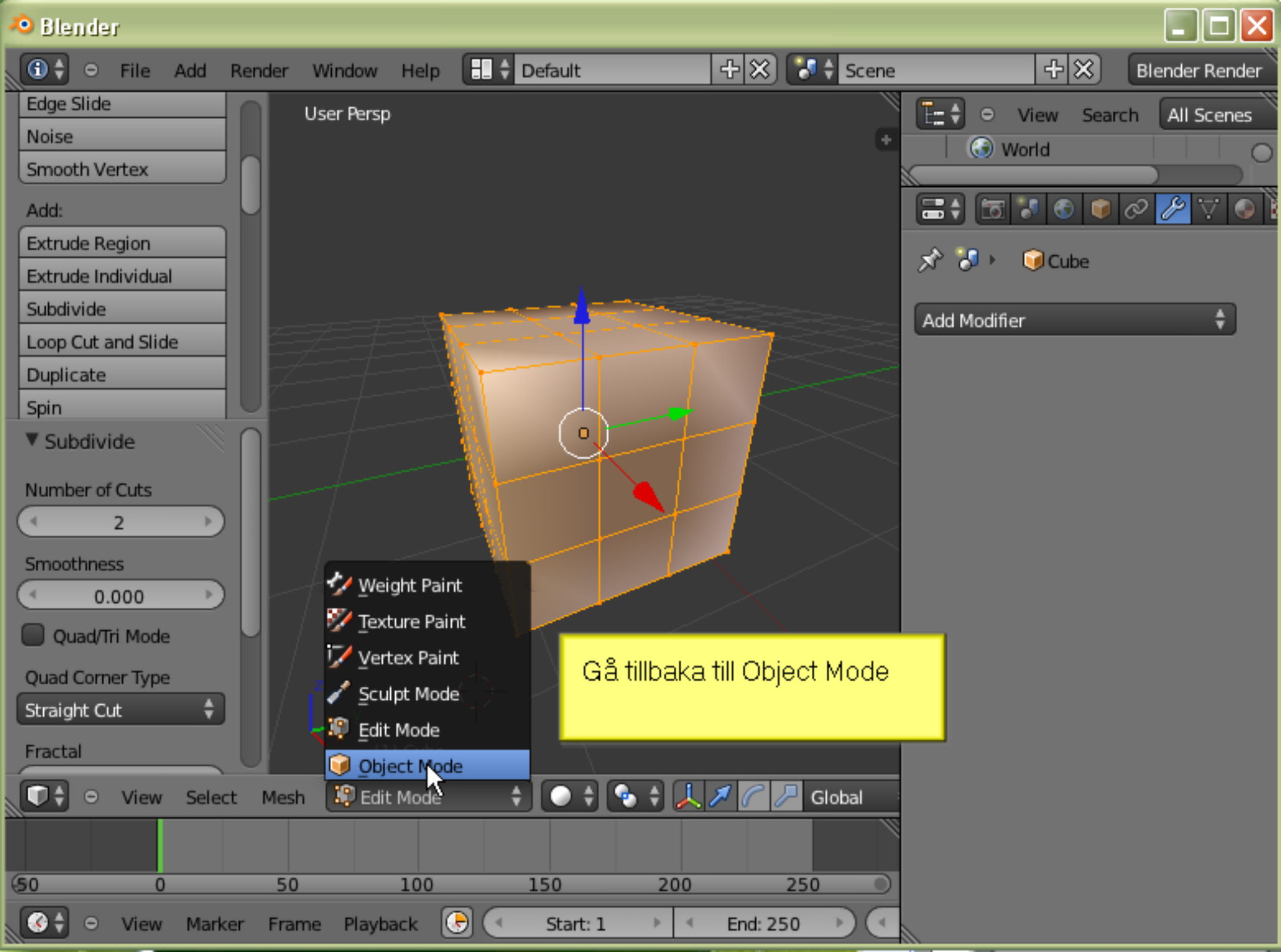
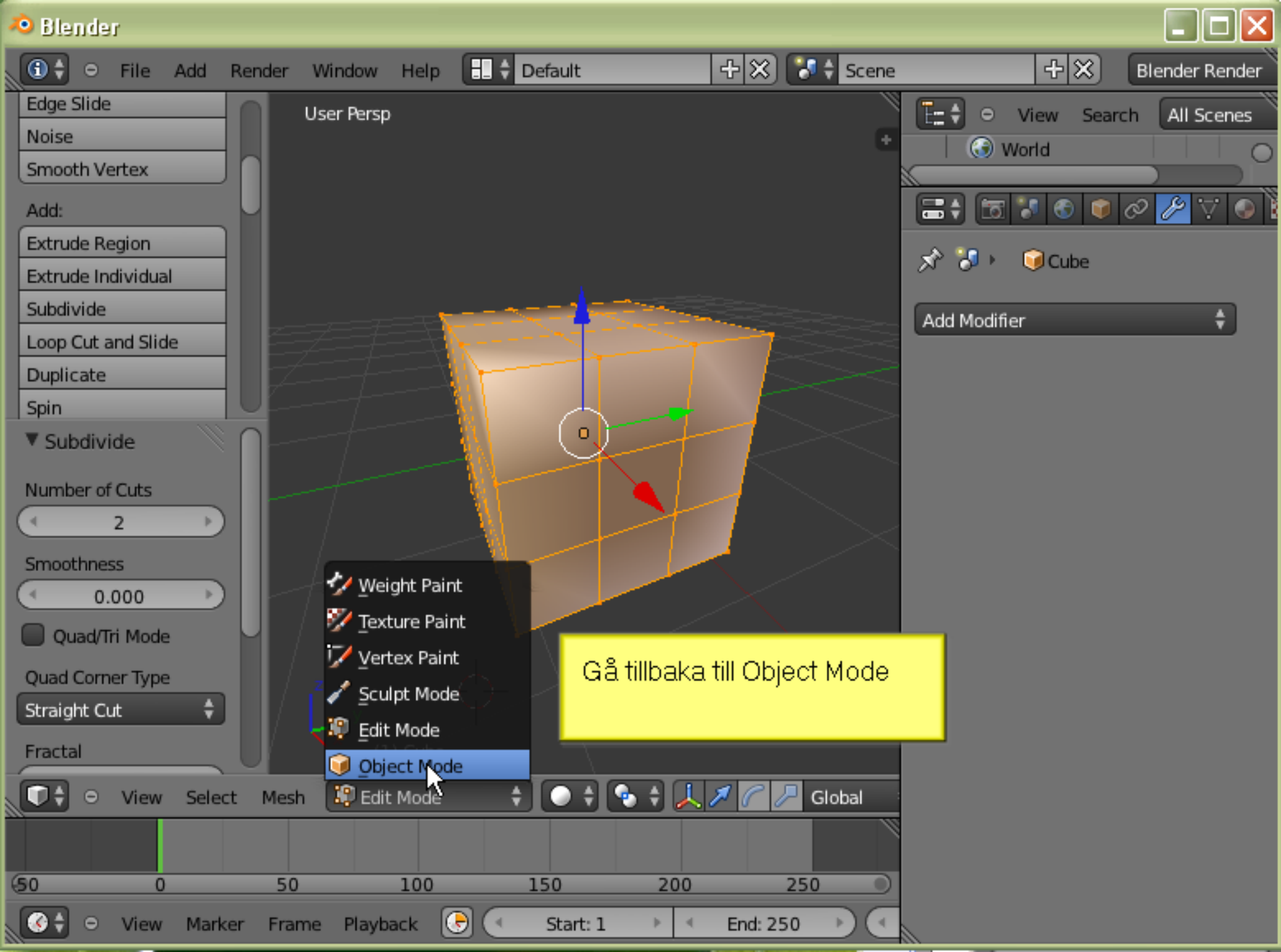


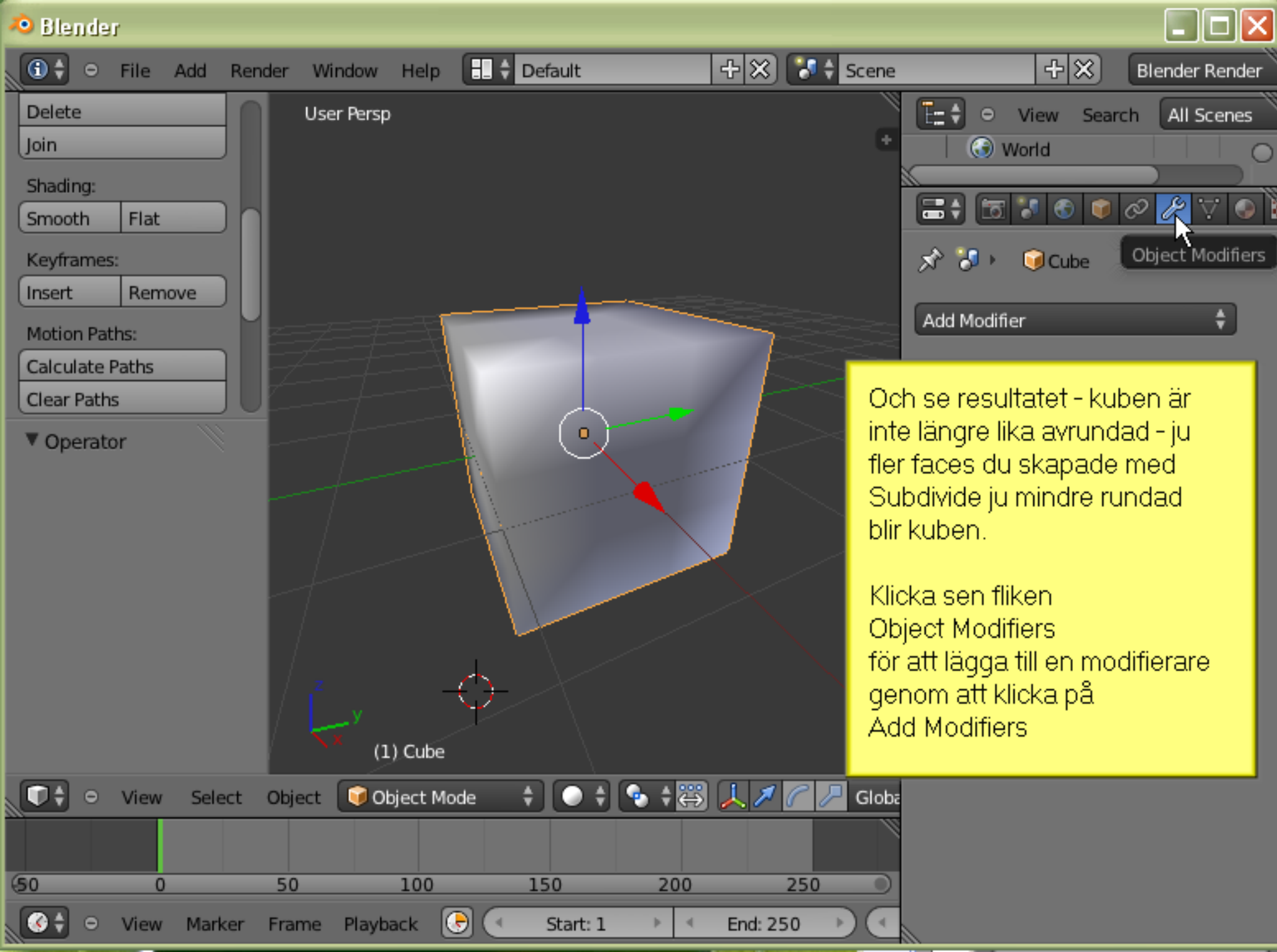


Och kuben får mjuka kanter





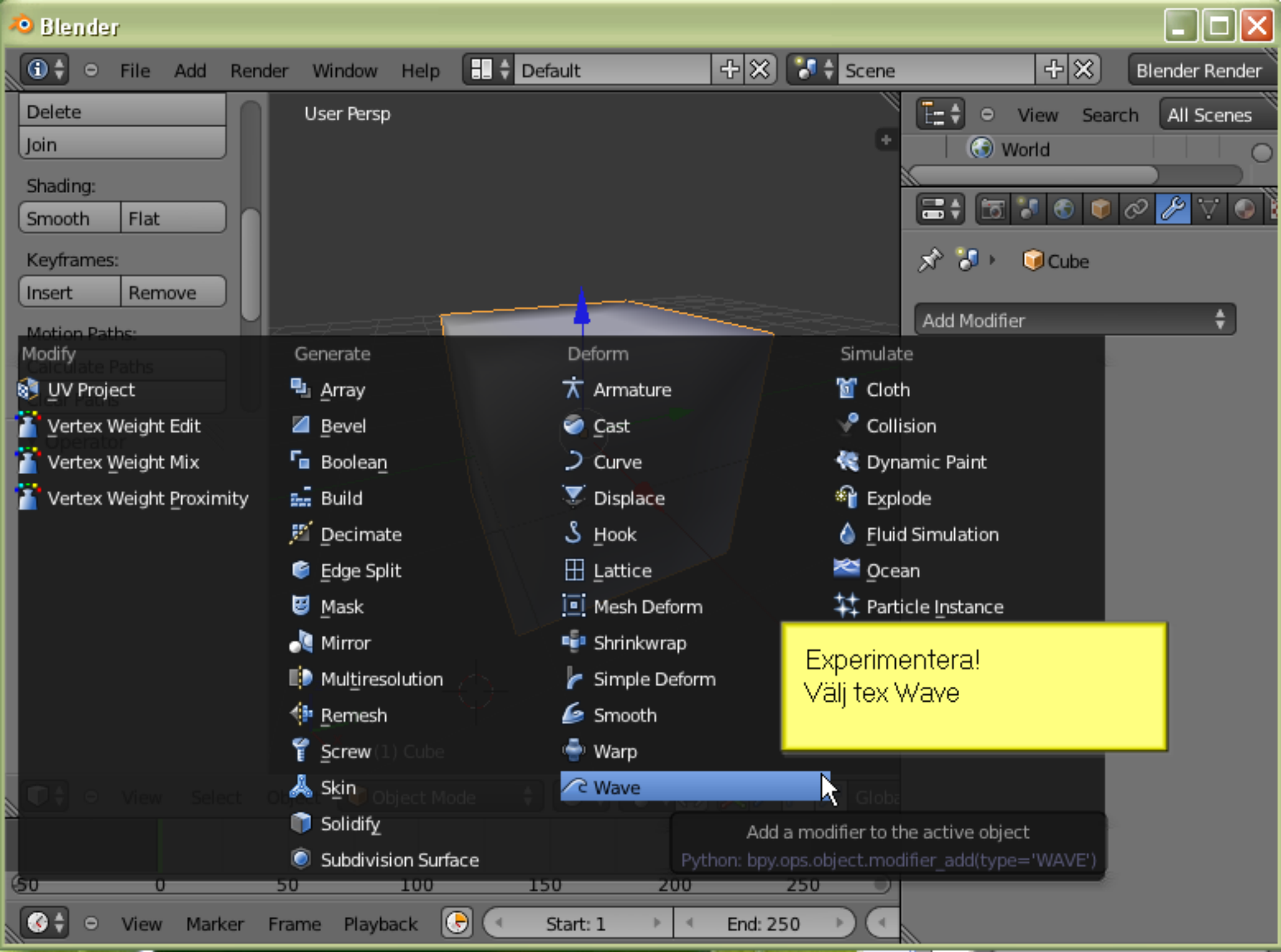




Och se resultatet - kuben är inte längre lika avrundad - ju fler faces du skapade med Subdivide ju mindre rundad blir kuben.

Klicka sen fliken Object Modifiers för att lägga till en modifierare genom att klicka på Add Modifiers





Delete

Join

Shading:

Smooth

Flat

Keyframes:

Insert

Remove

Motion Paths:

Modify

Calculate Paths

UV Project

Vertex Weight Edit

Vertex Weight Mix

Vertex Weight Proximity

Generate

Array

Bevel

Boolean

Build

Decimate

Edge Split

Mask

Mirror

Multiresolution

Remesh

Screw (1) Cube

Skin

Solidify

Subdivision Surface

Deform

Armature

Cast

Curve

Displace

Hook

Lattice

Mesh Deform

Shrinkwrap

Simple Deform

Smooth

Warp

Wave

Simulate

Cloth

Collision

Dynamic Paint

Explode

Fluid Simulation

Ocean

Particle Instance

Experimentera!  
Välj tex Wave

Add a modifier to the active object  
Python: bpy.ops.object.modifier\_add(type='WAVE')

View

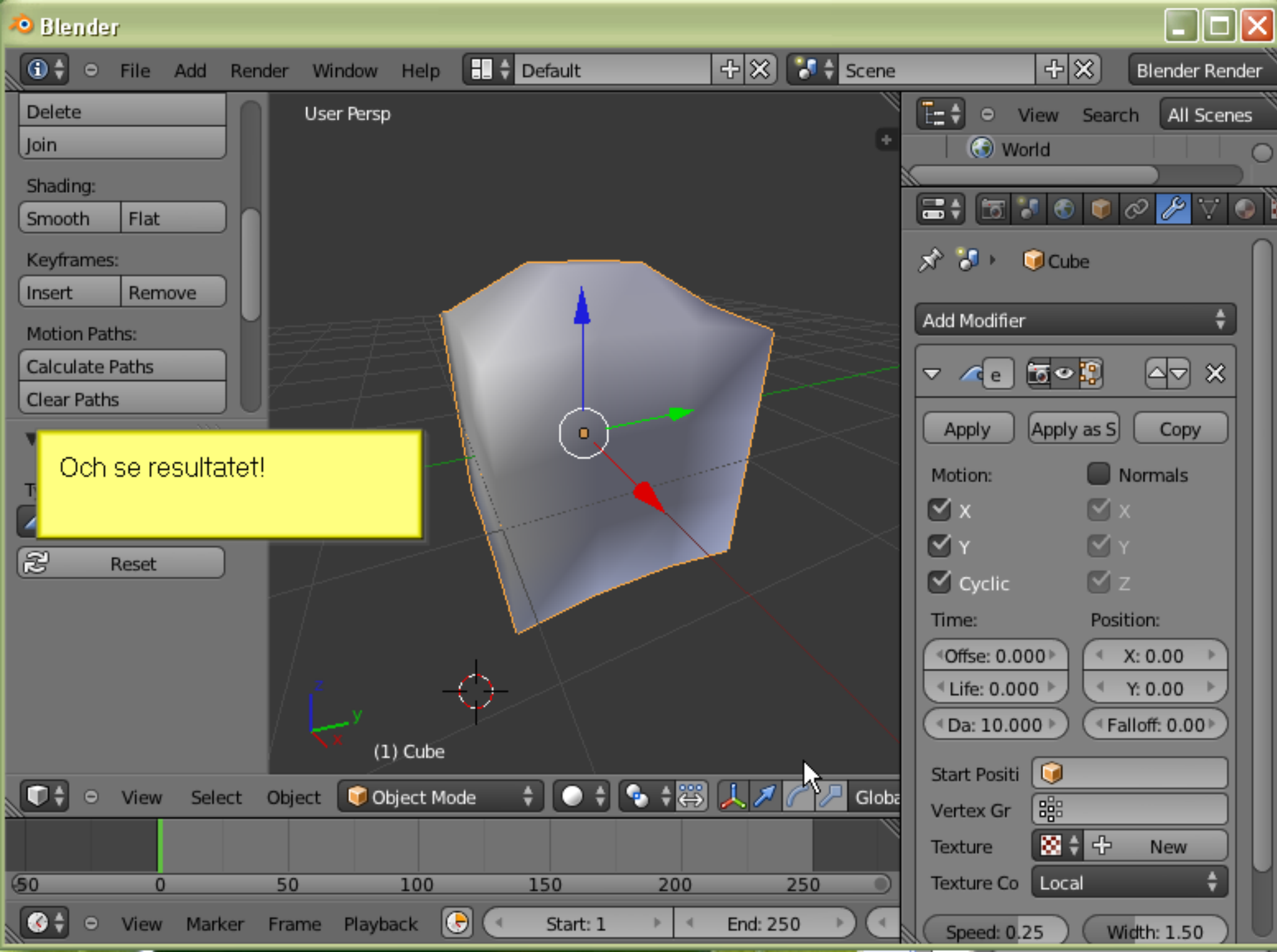
Marker

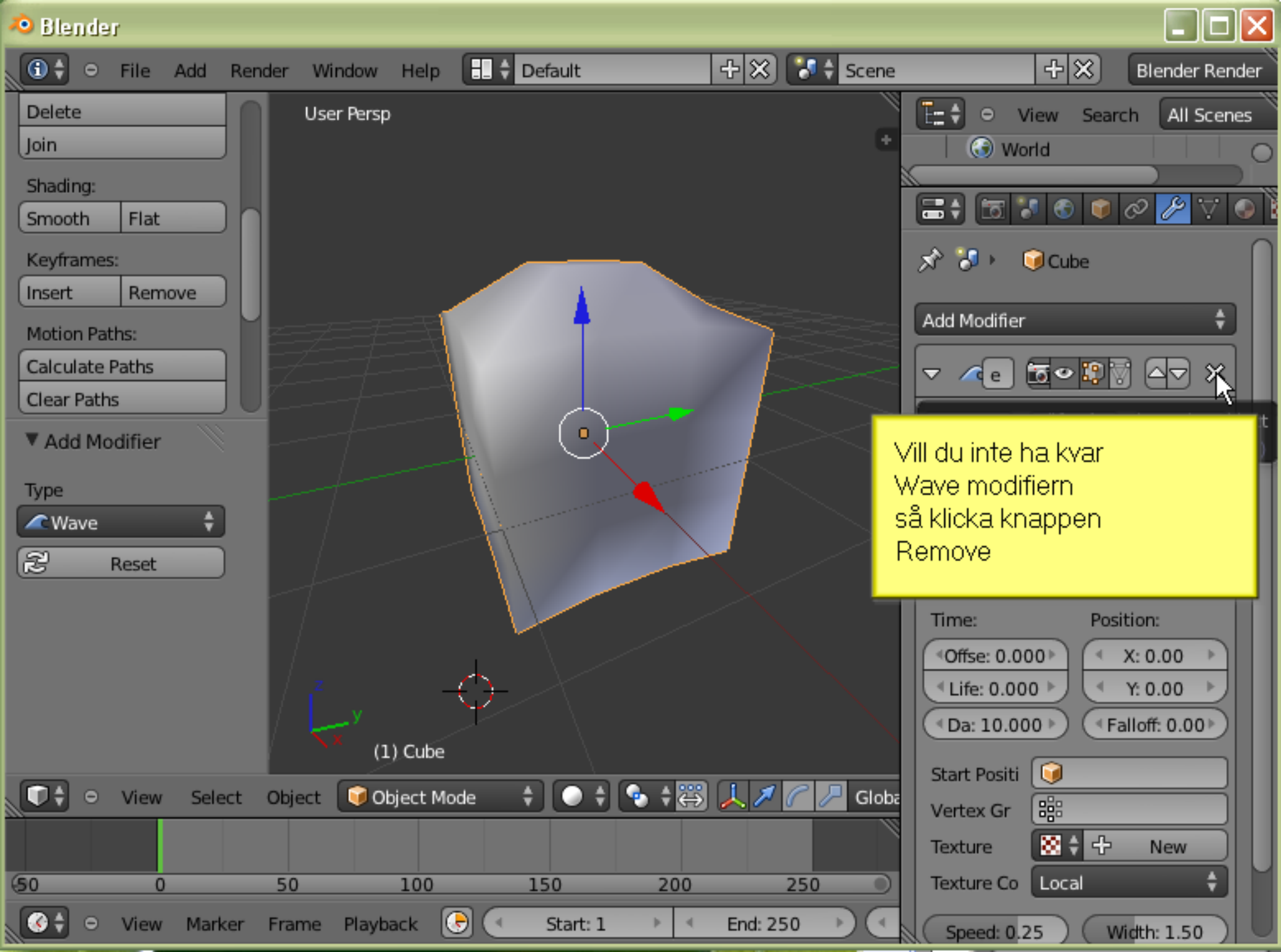
Frame

Playback

Start: 1

End: 250



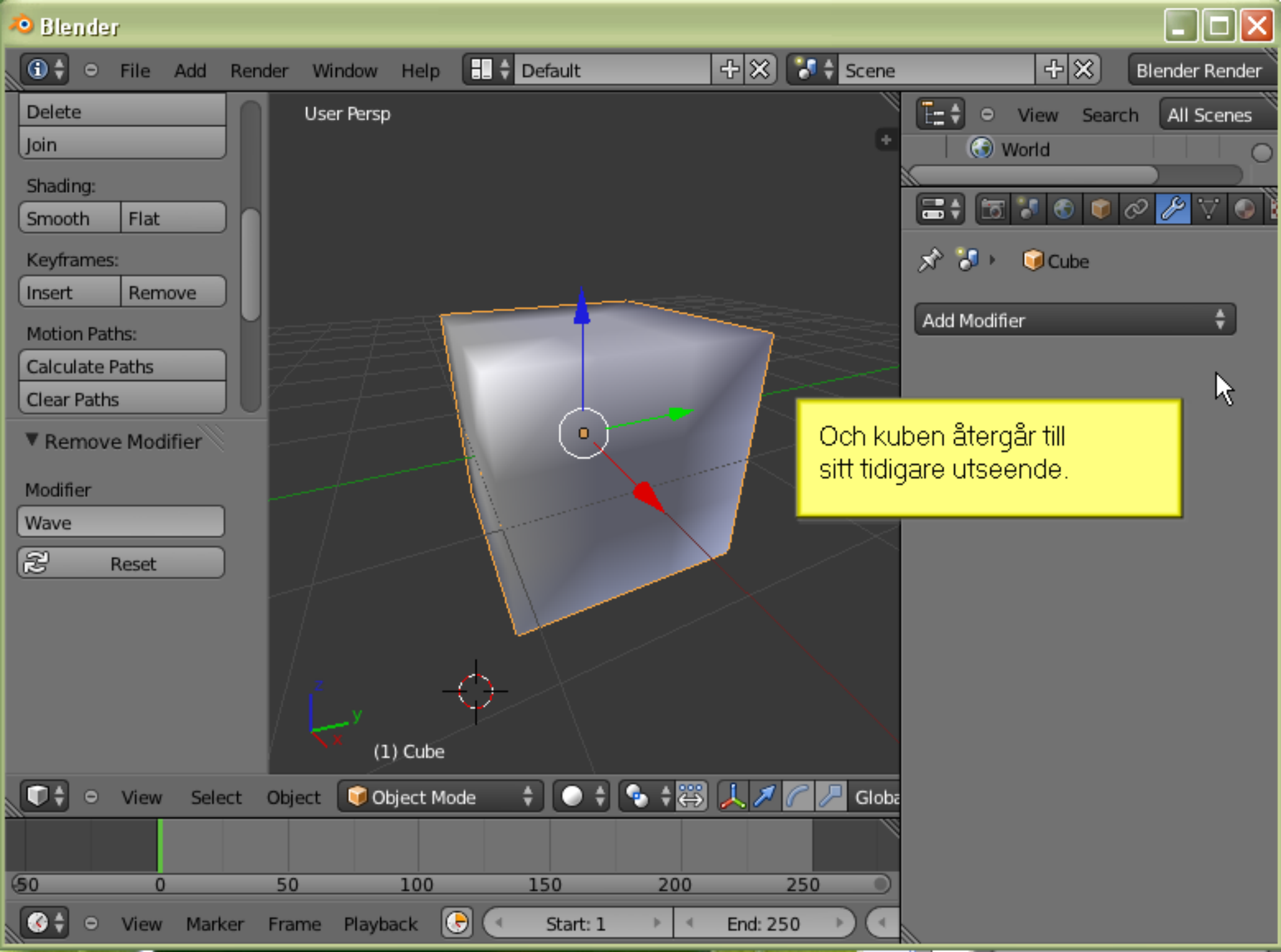


User Persp

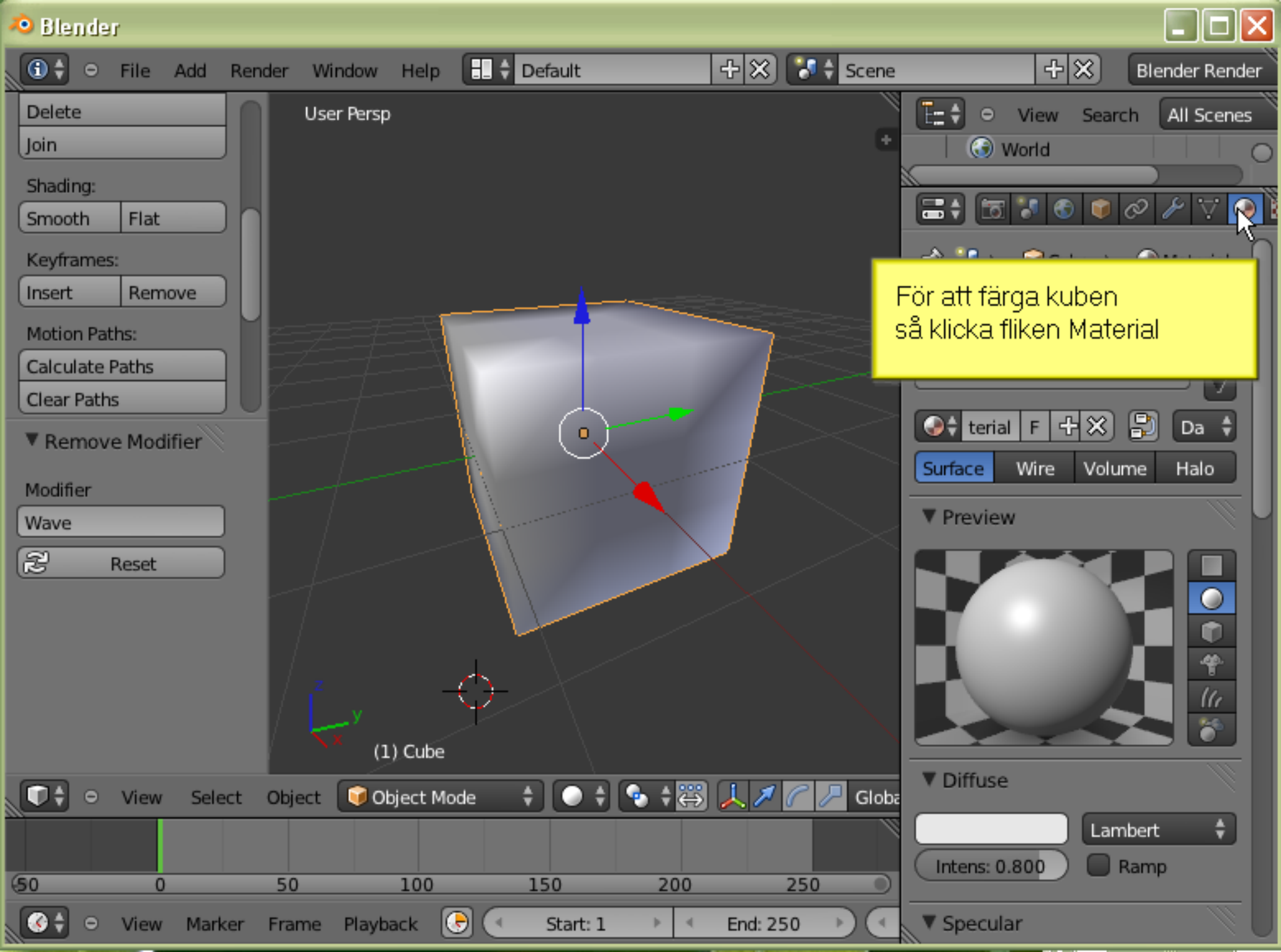
Vill du inte ha kvar  
Wave modifiern  
så klicka knappen  
Remove

(1) Cube

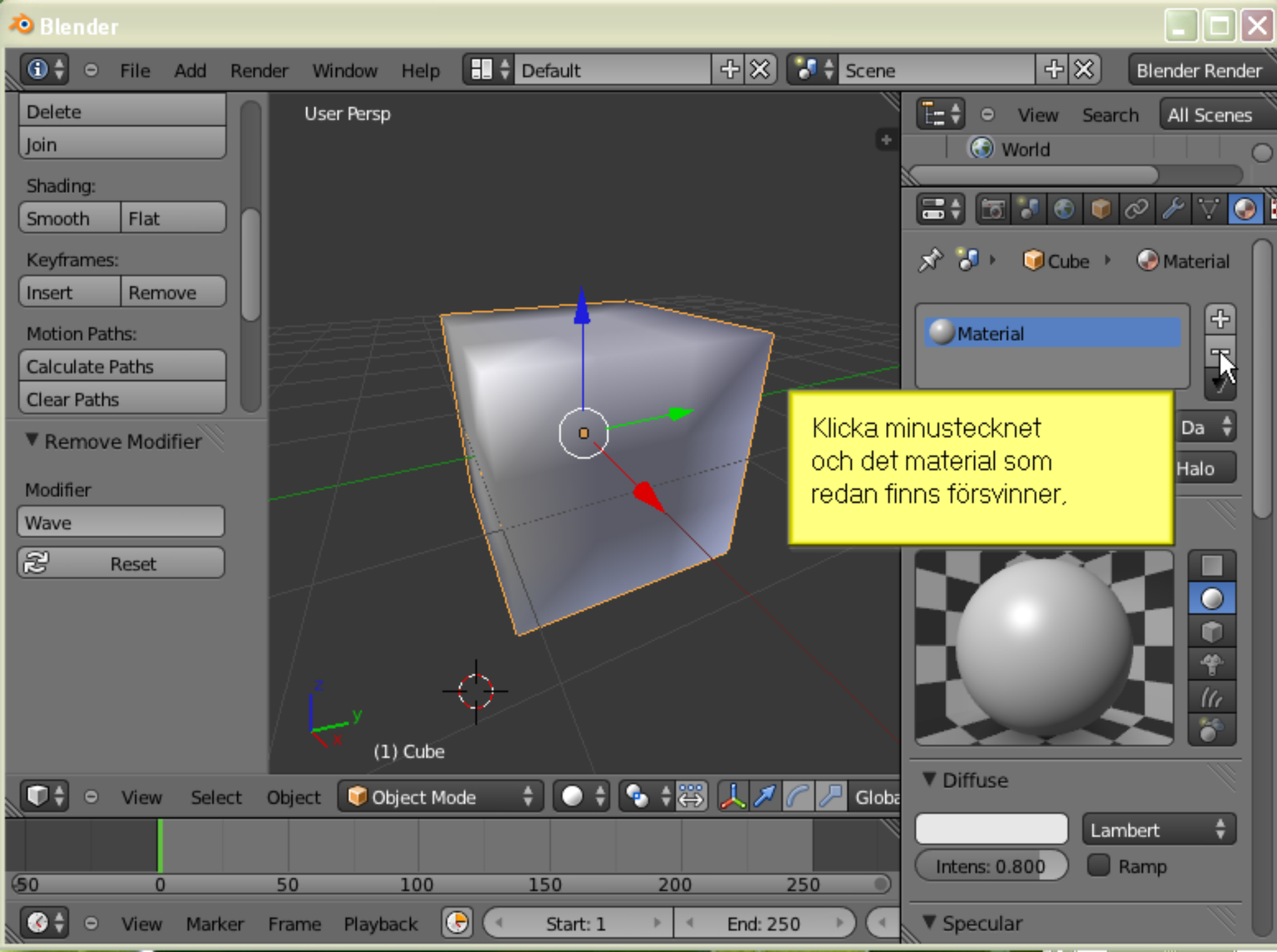
Time: Position:  
«Offse: 0.000» «X: 0.00»  
«Life: 0.000» «Y: 0.00»  
«Da: 10.000» «Falloff: 0.00»  
Start Positi  
Vertex Gr  
Texture  
Texture Co  
Speed: 0.25 Width: 1.50

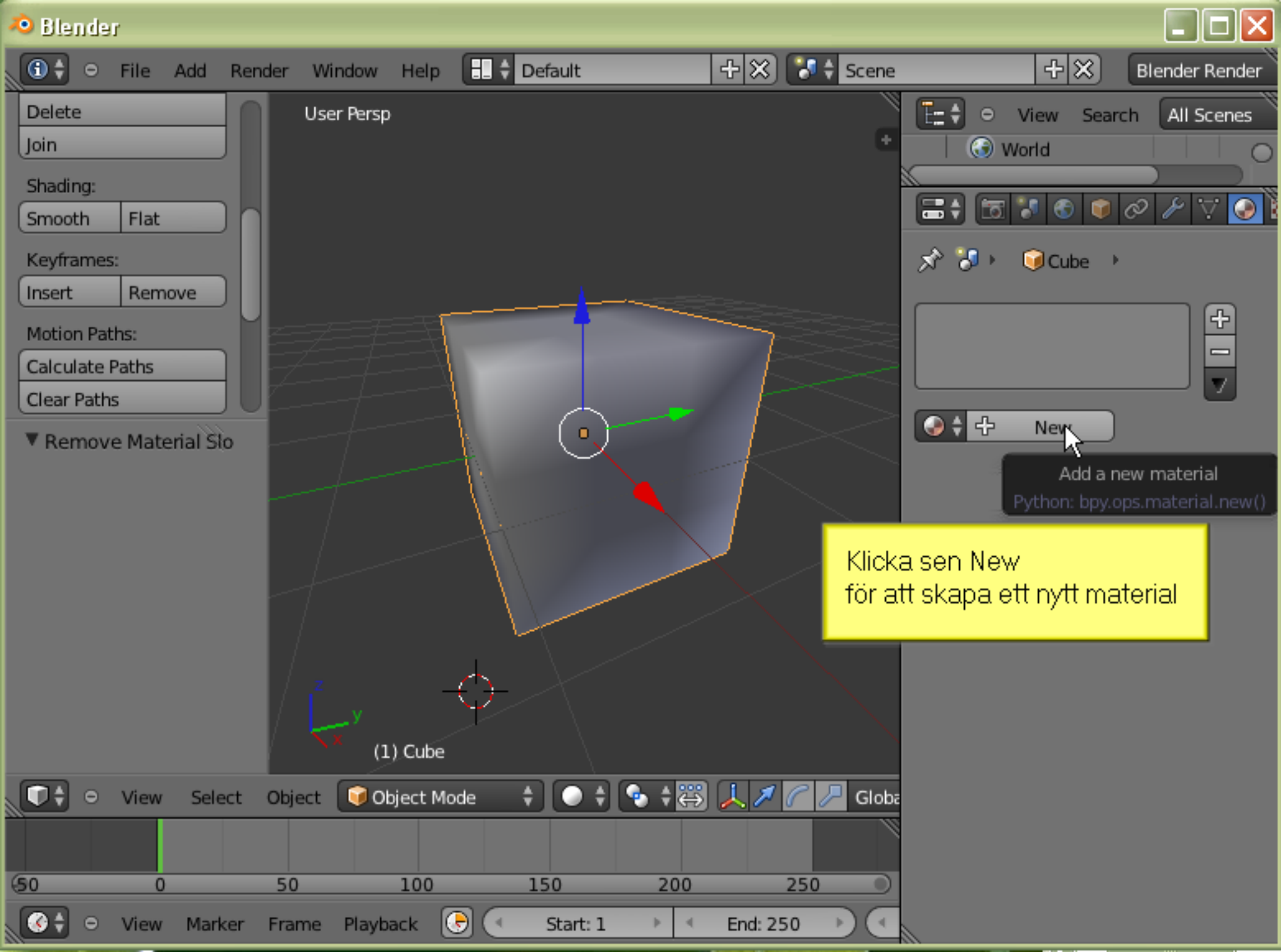


Och kuben återgår till sitt tidigare utseende.



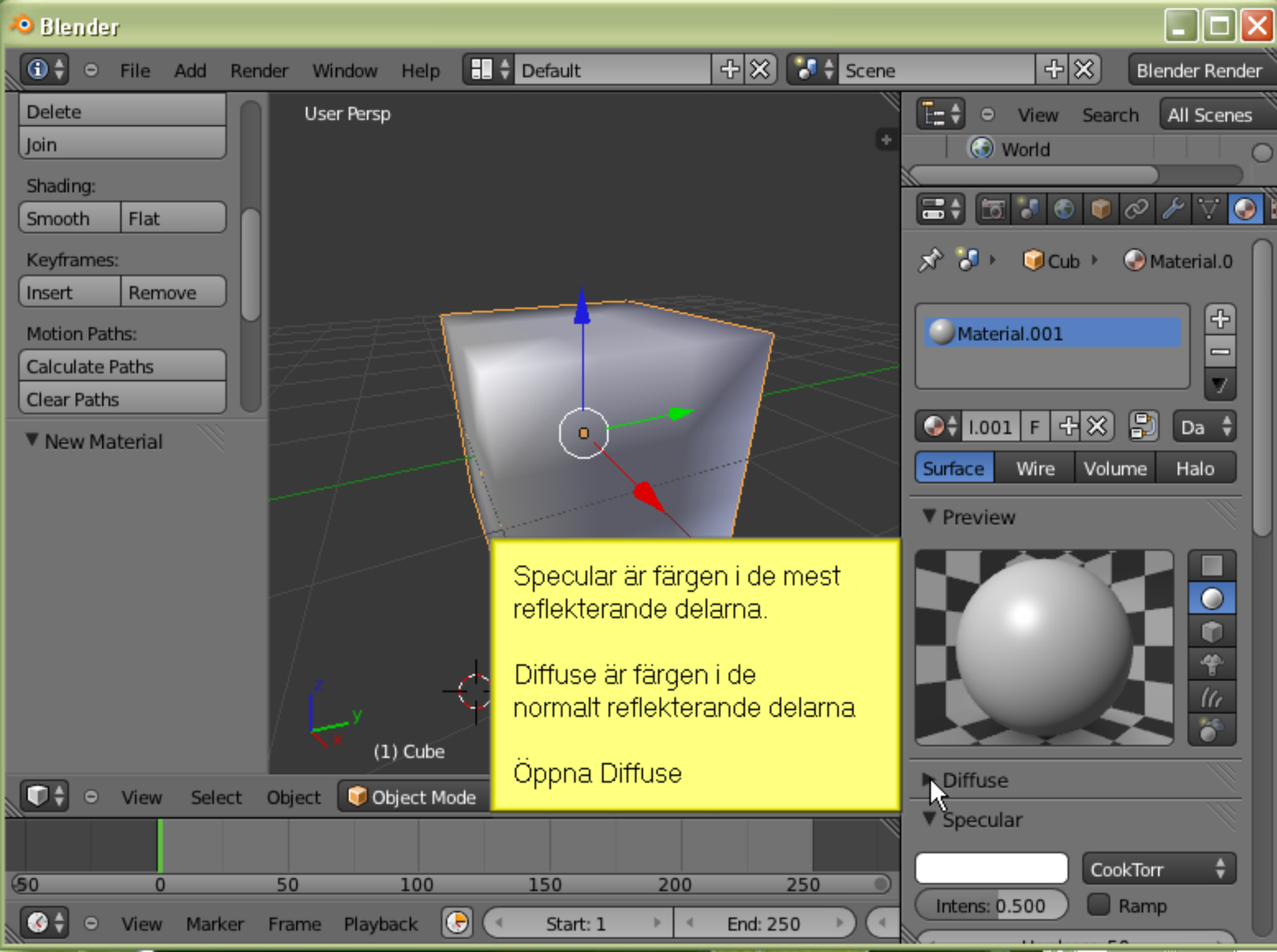
För att färga kuben  
så klicka fliken Material

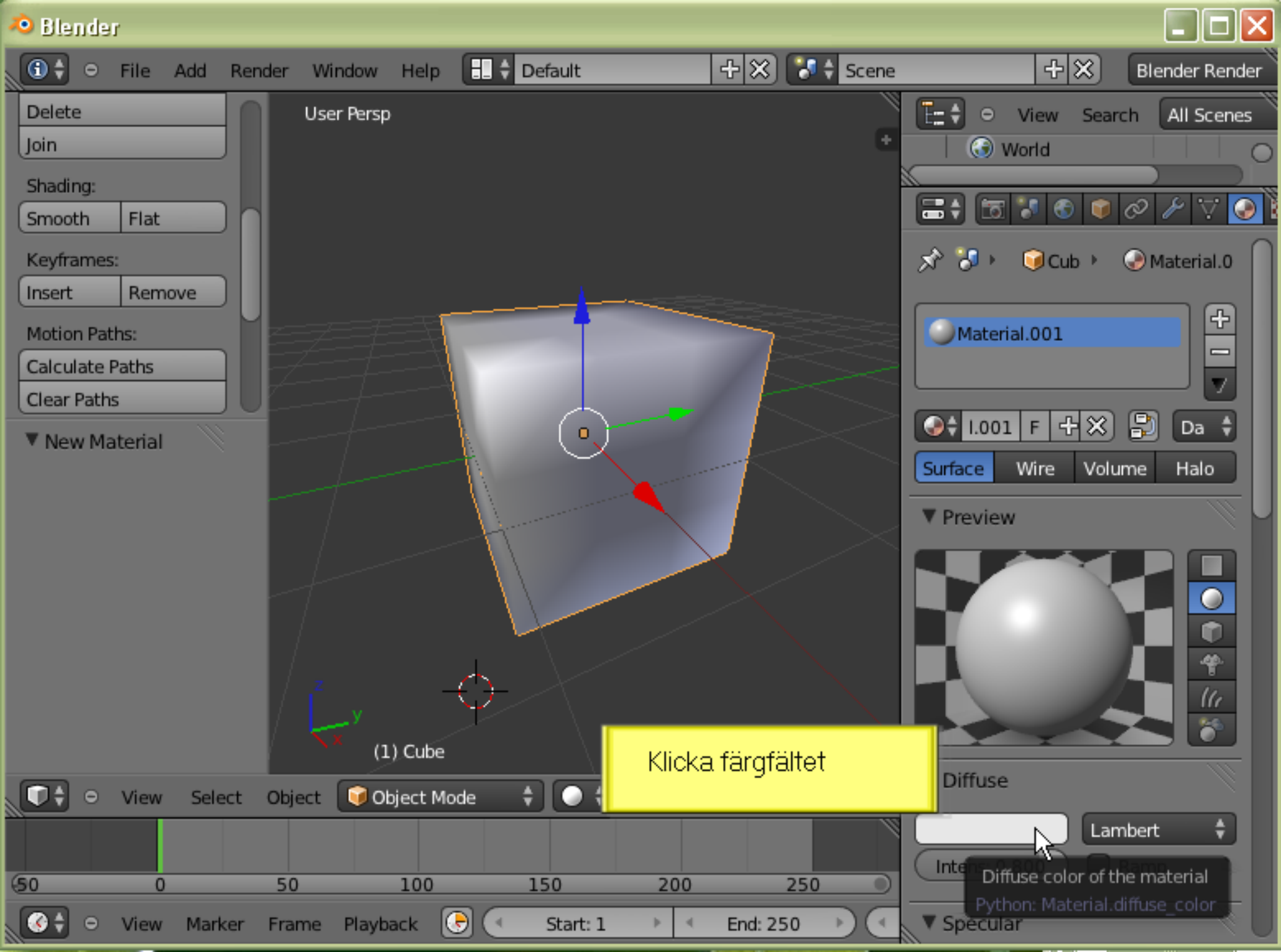
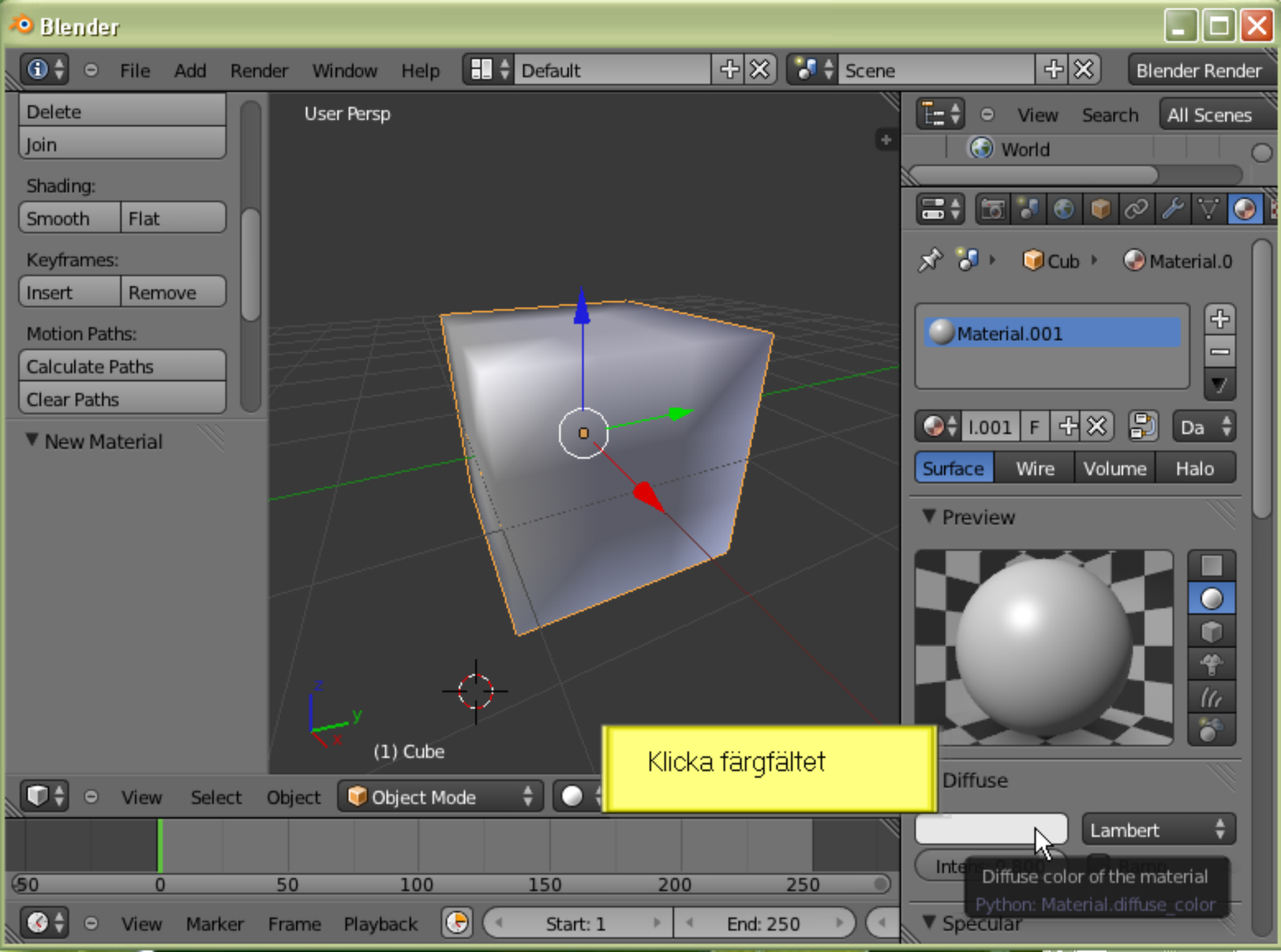


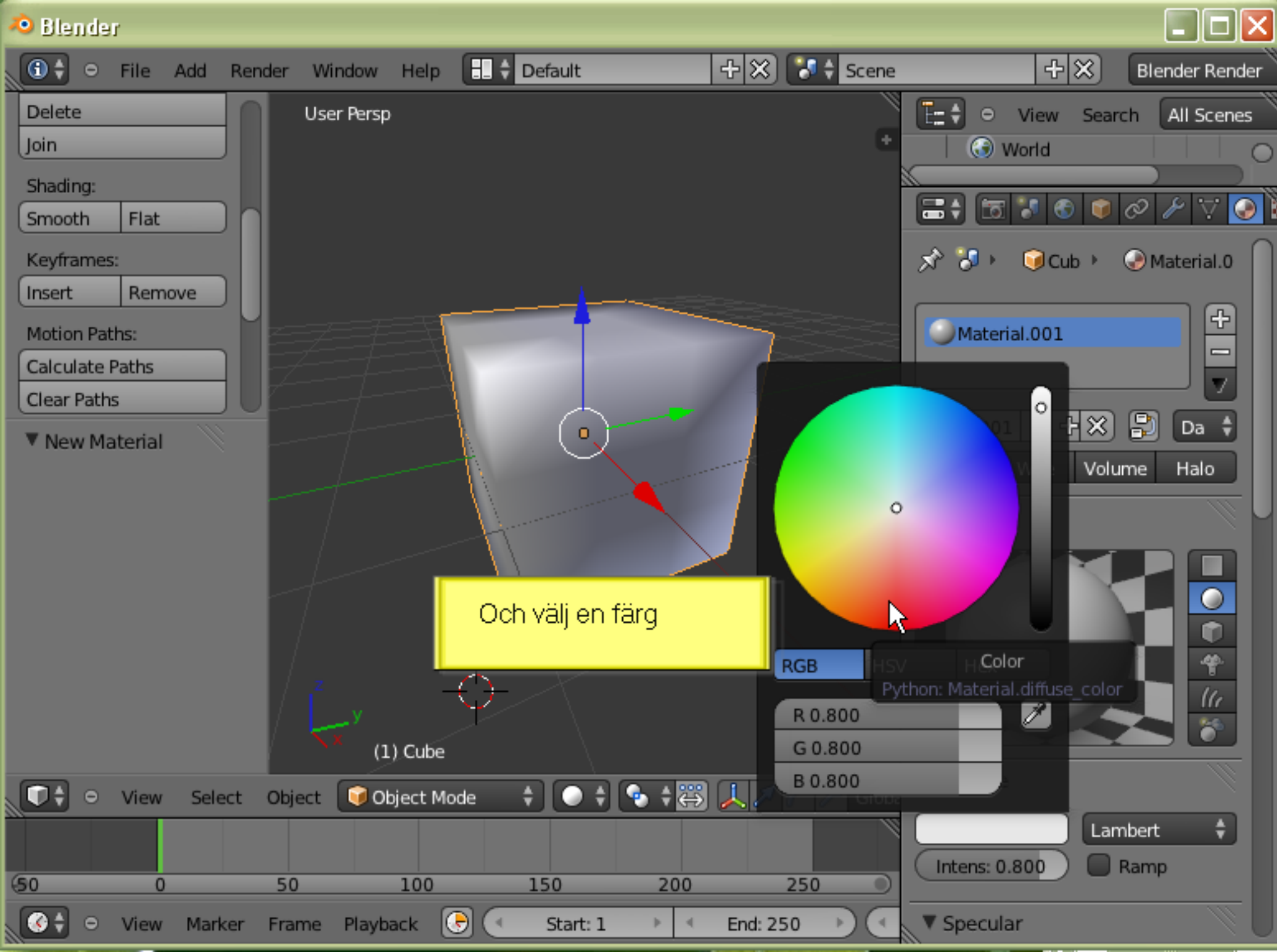


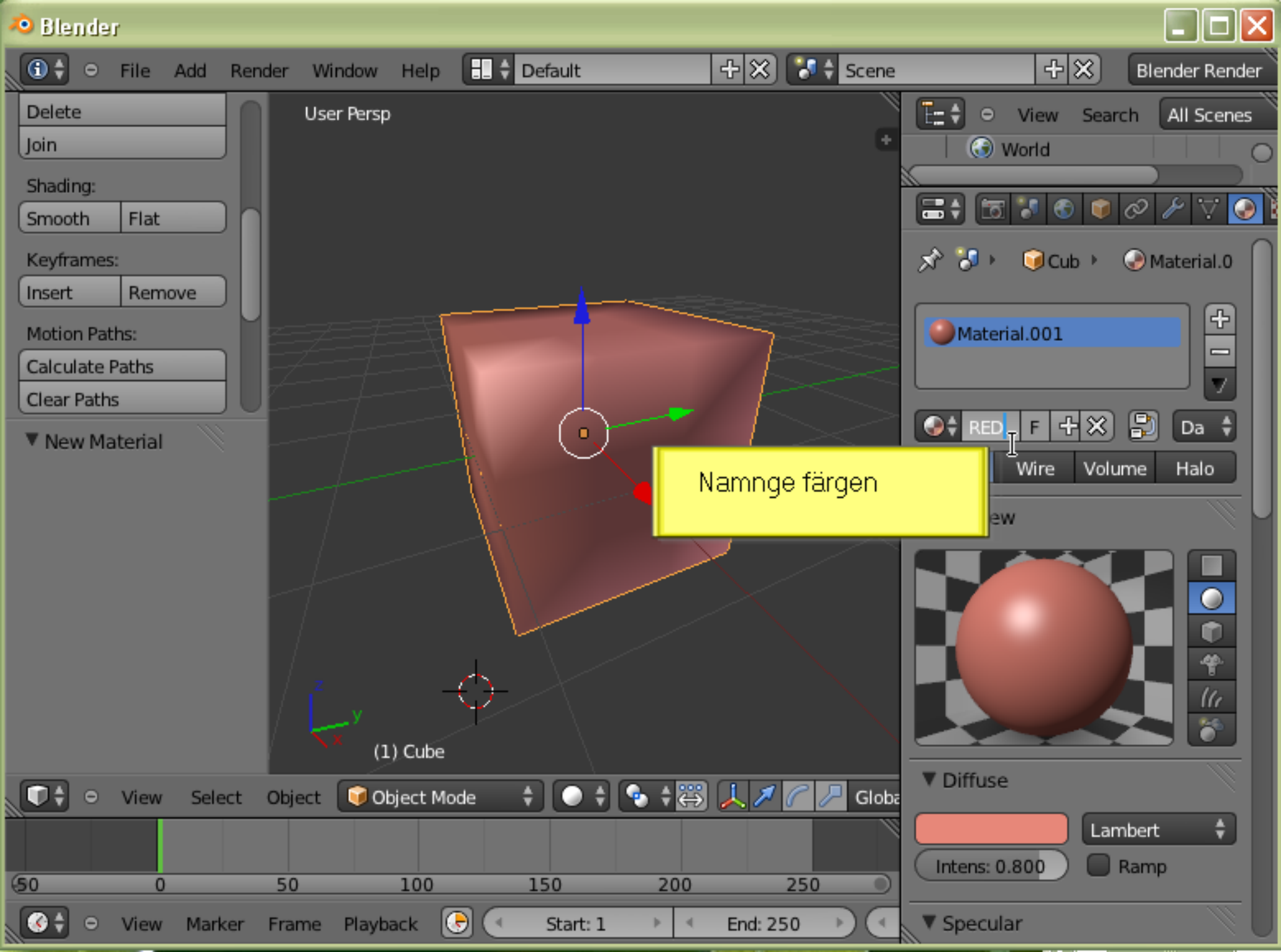
Klicka sen New  
för att skapa ett nytt material











Delete

Join

Shading:

Smooth Flat

Keyframes:

Insert Remove

Motion Paths:

Calculate Paths

Clear Paths

New Material

User Persp

View Search All Scenes

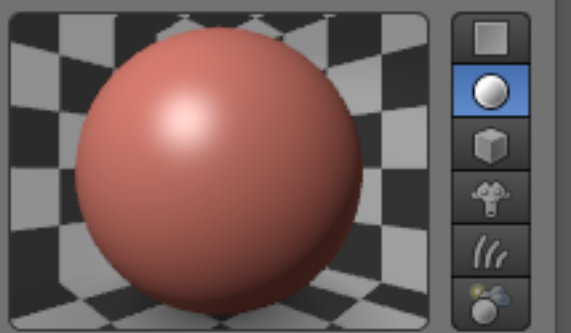
World

Cub Material.0

Material.001

RED F Da Wire Volume Halo

Namnge färgen



Diffuse

Lambert

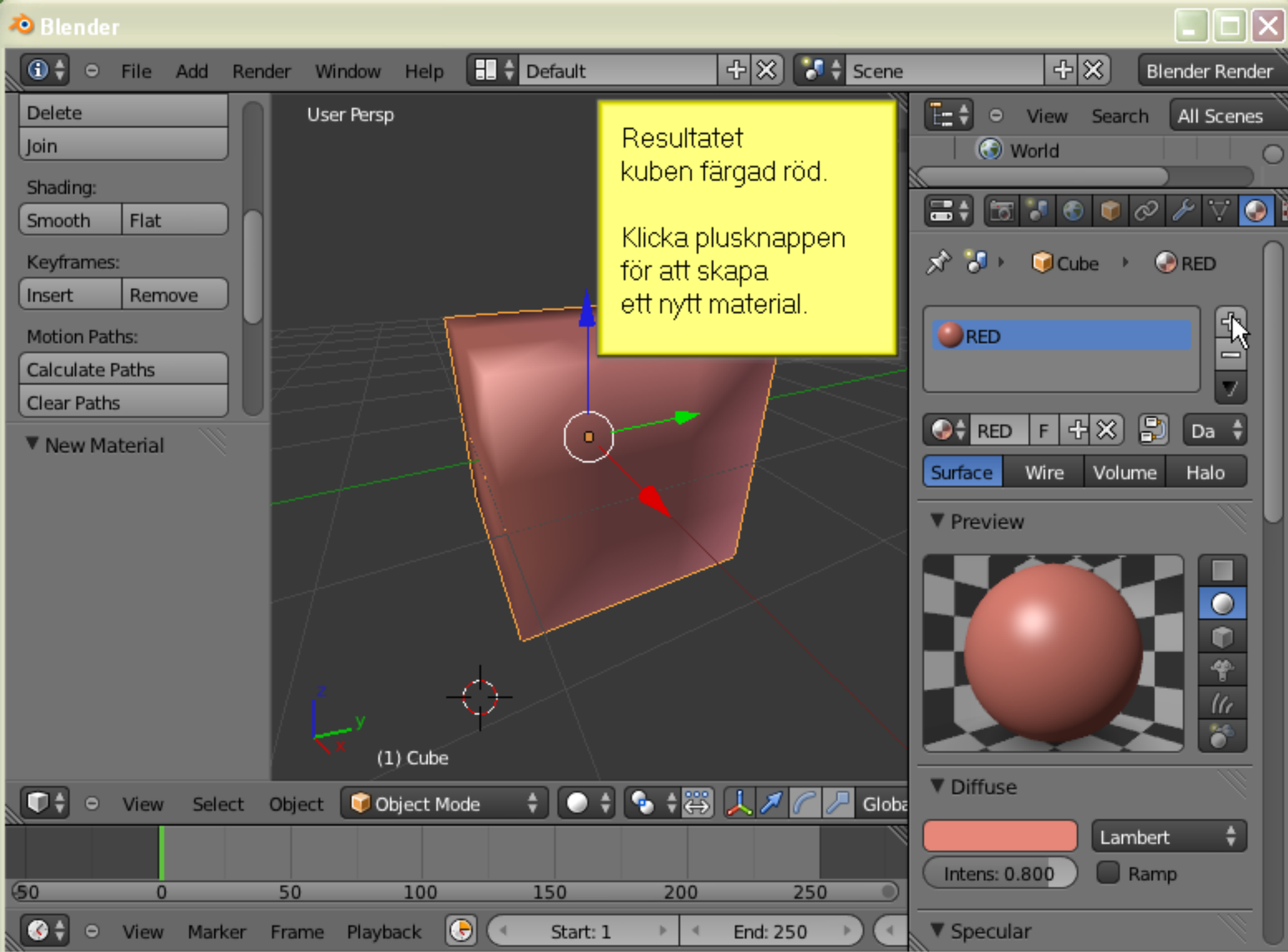
Intens: 0.800 Ramp

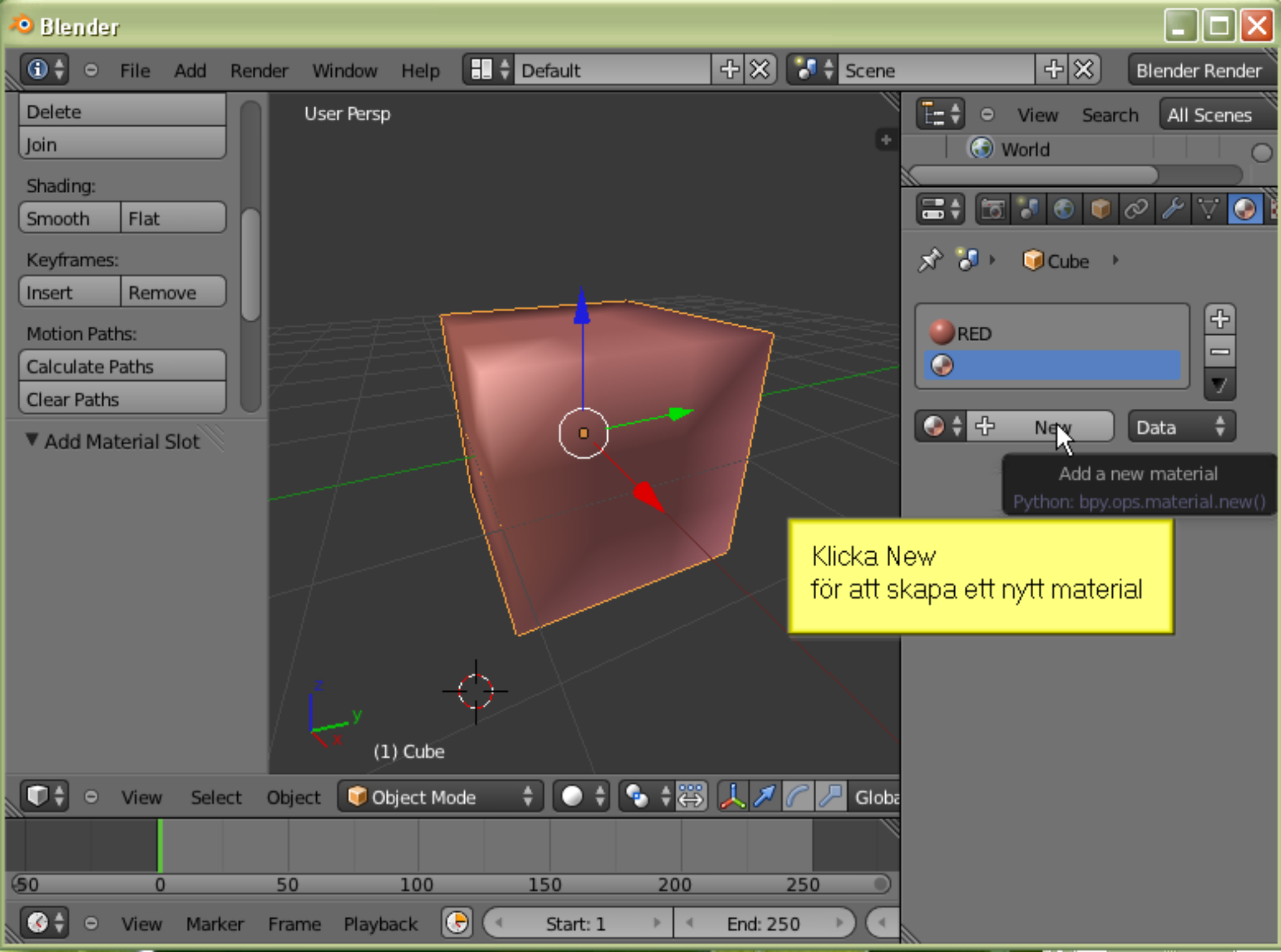
Specular

View Select Object Object Mode

50 0 50 100 150 200 250

View Marker Frame Playback Start: 1 End: 250





Delete

Join

Shading:

Smooth

Flat

Keyframes:

Insert

Remove

Motion Paths:

Calculate Paths

Clear Paths

▼ Add Material Slot

User Persp

(1) Cube

(1) Cube

View

Search

All Scenes

World

Cube

RED

New

Data

Add a new material

Python: bpy.ops.material.new()

Klicka New

för att skapa ett nytt material

View

Select

Object

Object Mode

Global

View

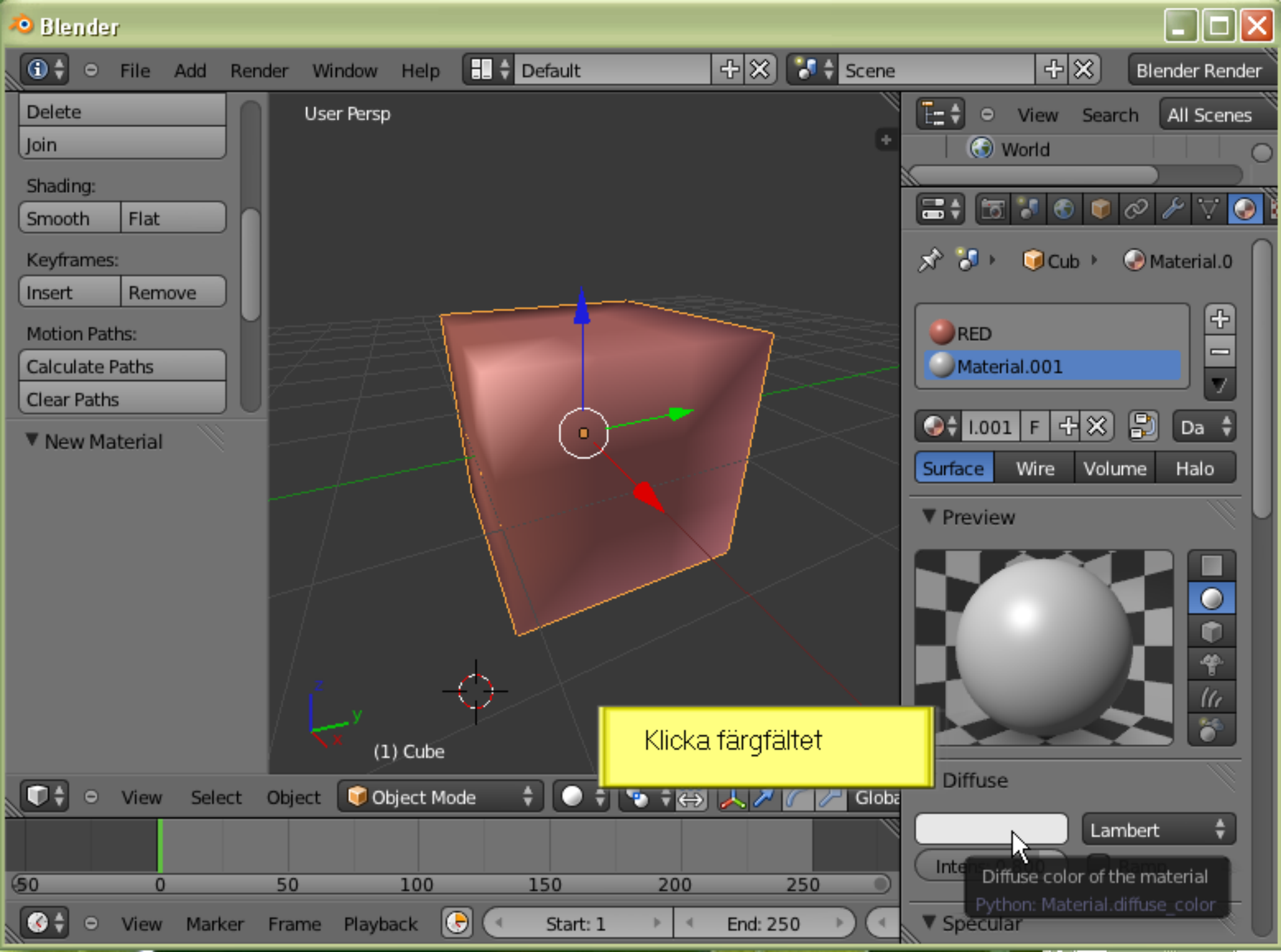
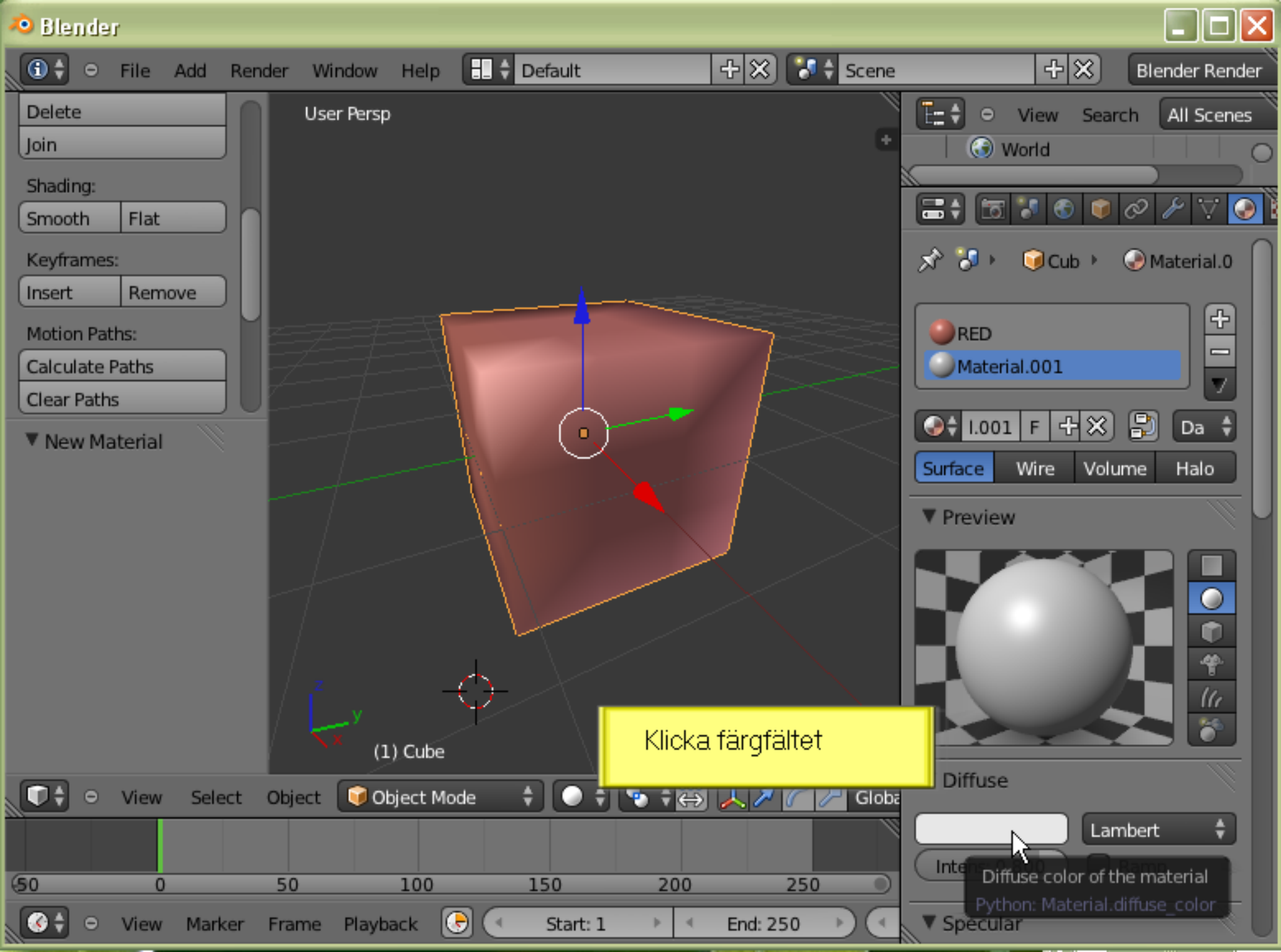
Marker

Frame

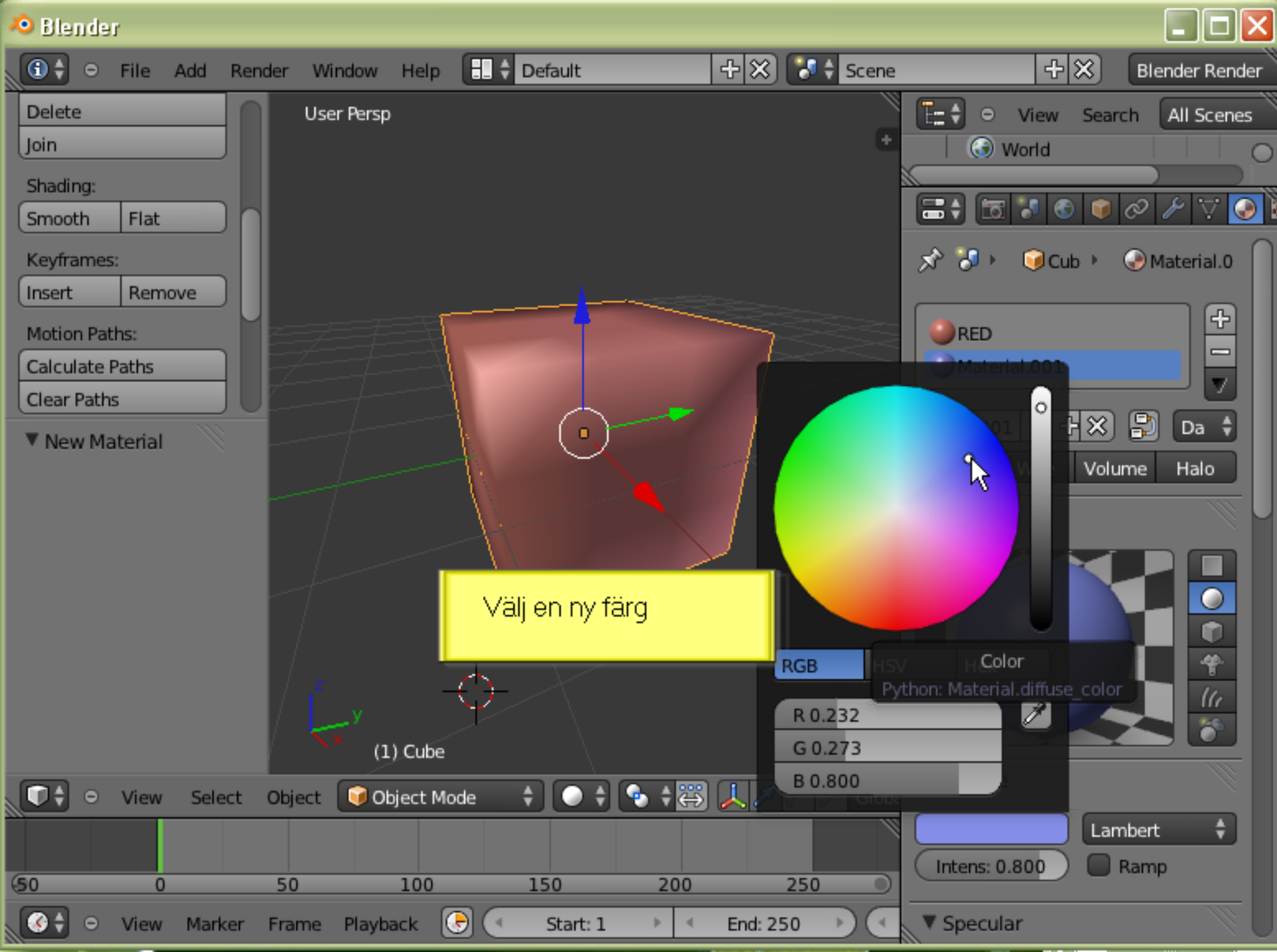
Playback

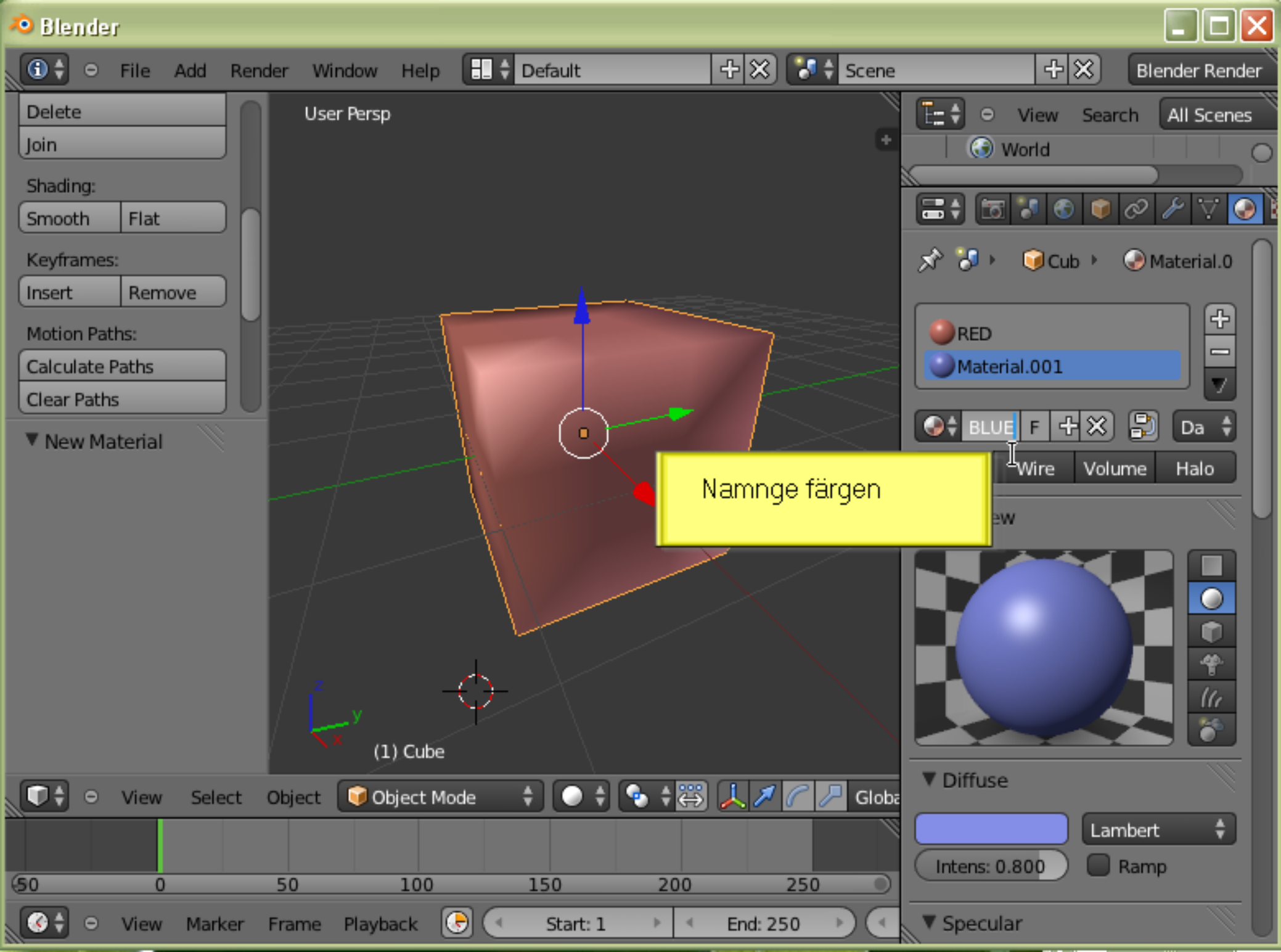
Start: 1

End: 250









Delete

Join

Shading:

Smooth Flat

Keyframes:

Insert Remove

Motion Paths:

Calculate Paths

Clear Paths

New Material

User Persp

(1) Cube

Namnge färger

View Search All Scenes

World

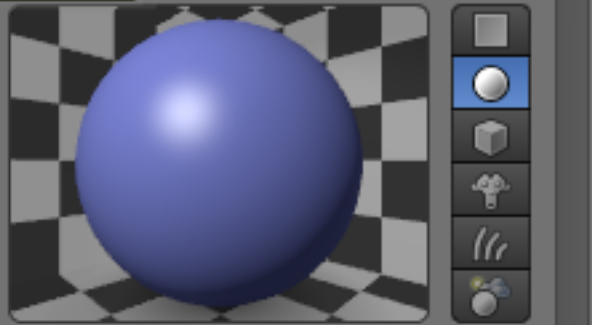
Cub Material.0

RED

Material.001

BLUE F Da

Wire Volume Halo

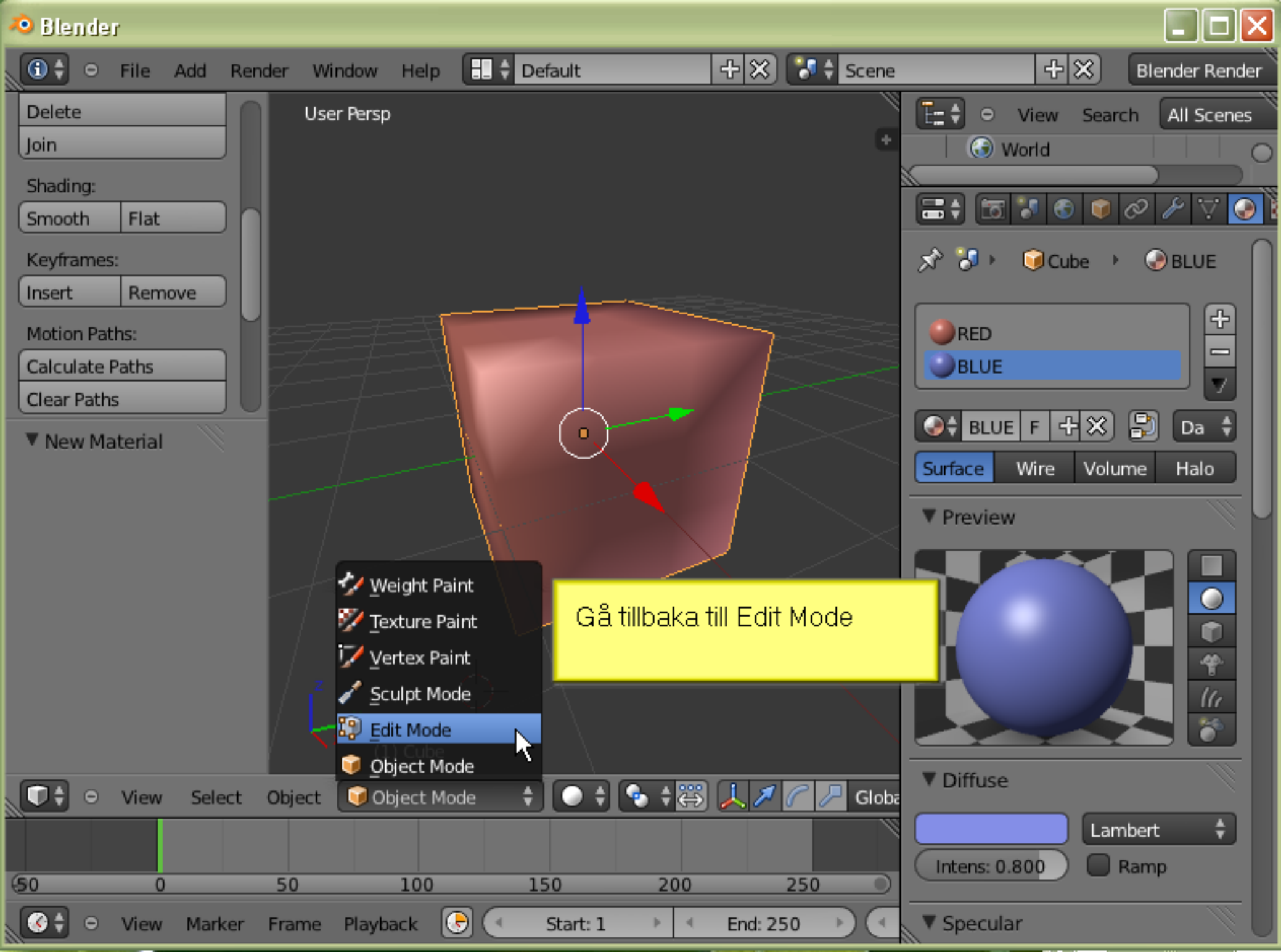


Diffuse

Lambert

Intens: 0.800 Ramp

Specular



Delete

Join

Shading:

Smooth Flat

Keyframes:

Insert Remove

Motion Paths:

Calculate Paths

Clear Paths

New Material

User Persp

- Weight Paint
- Texture Paint
- Vertex Paint
- Sculpt Mode
- Edit Mode**
- Object Mode

Gå tillbaka till Edit Mode

View Search All Scenes

World

Cube BLUE

RED BLUE

BLUE F Da

Surface Wire Volume Halo

Preview

Diffuse

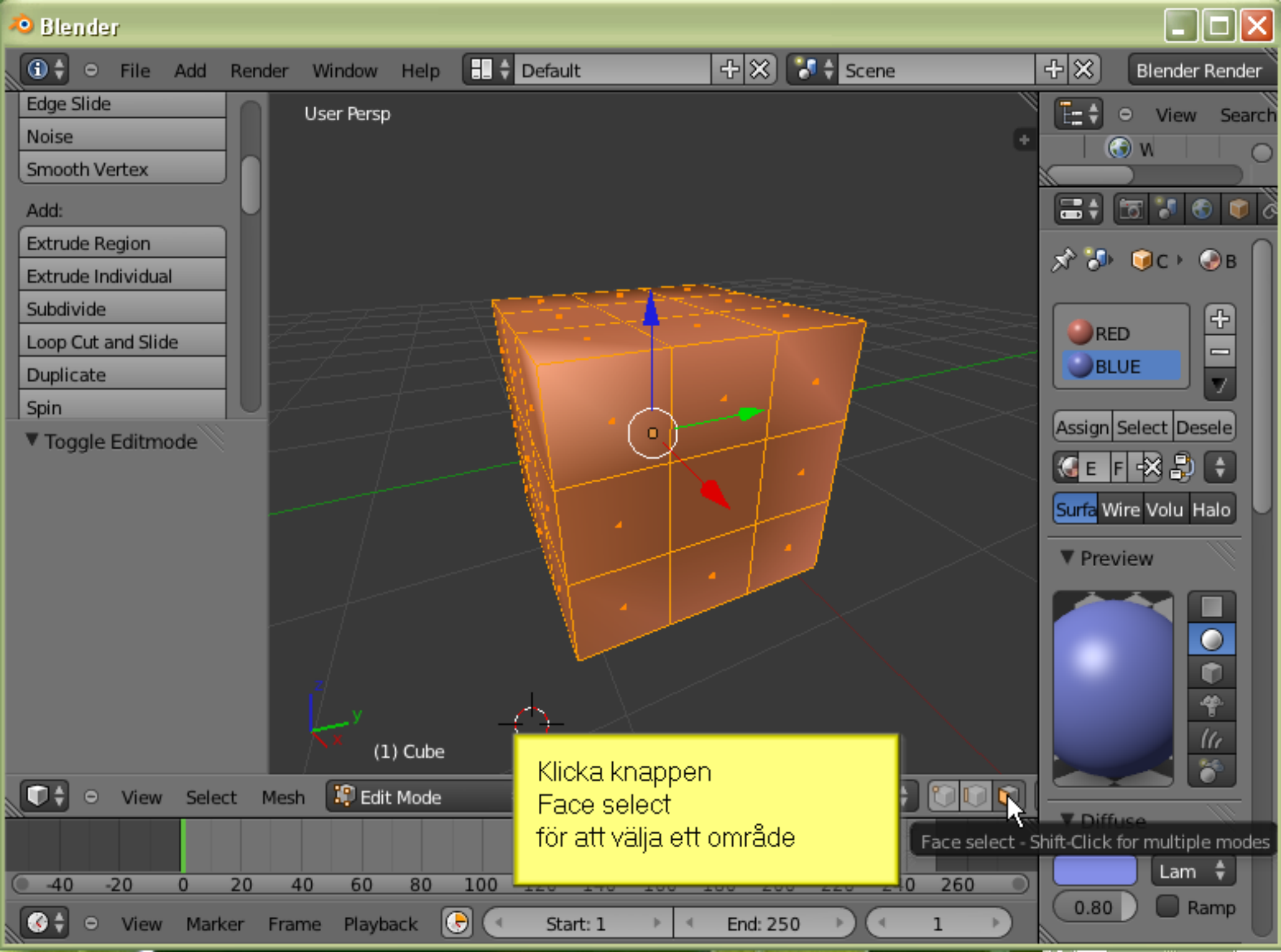
Lambert

Intens: 0.800 Ramp

Specular

View Select Object Object Mode

Start: 1 End: 250



- Edge Slide
- Noise
- Smooth Vertex
- Add:
- Extrude Region
- Extrude Individual
- Subdivide
- Loop Cut and Slide
- Duplicate
- Spin
- ▼ Toggle Editmode

User Persp

View Search

W

C B

RED BLUE

Assign Select Desele

E F X

Surfa Wire Volu Halo

▼ Preview

Diffuse

Lam

0.80 Ramp

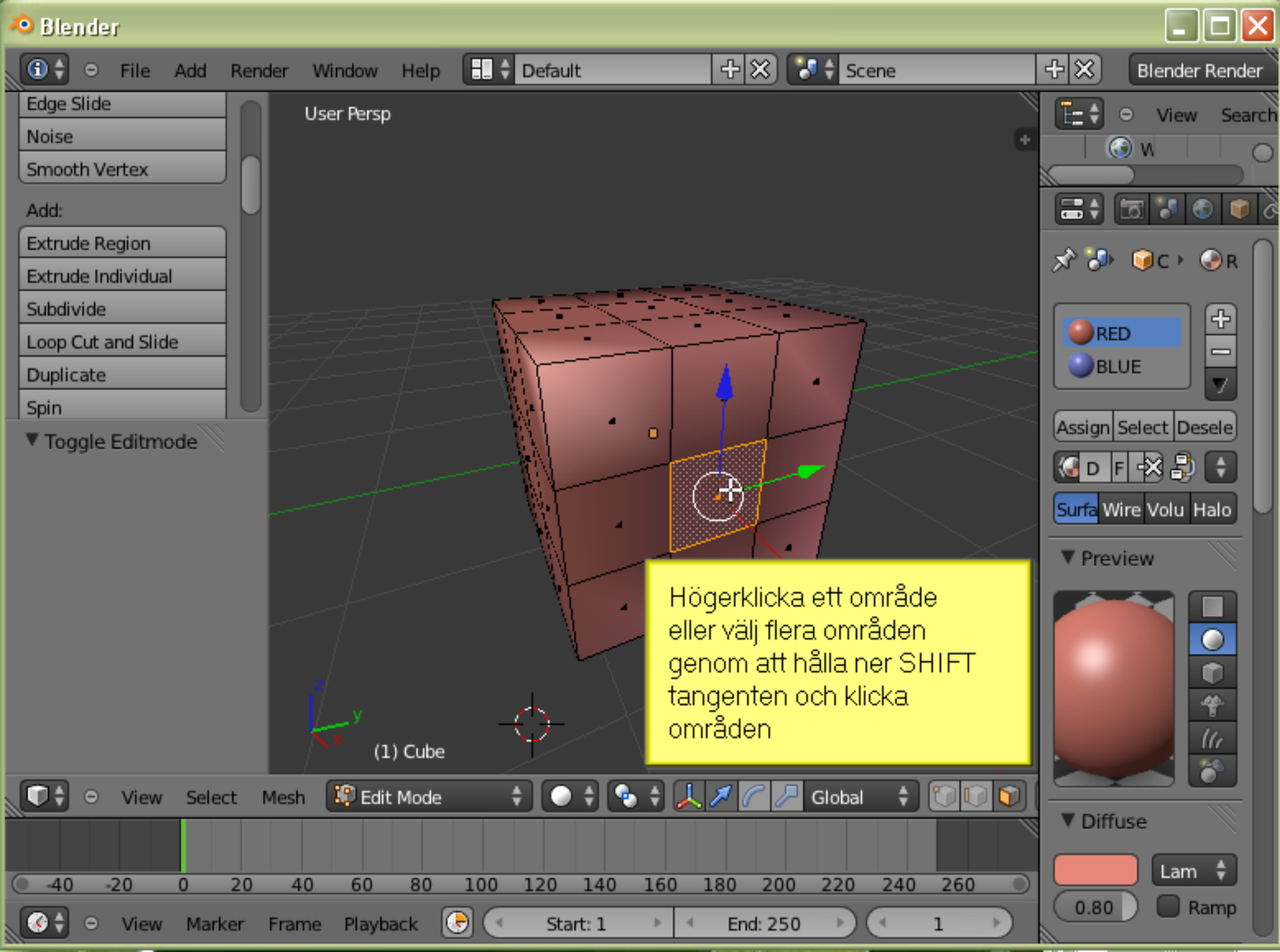
(1) Cube

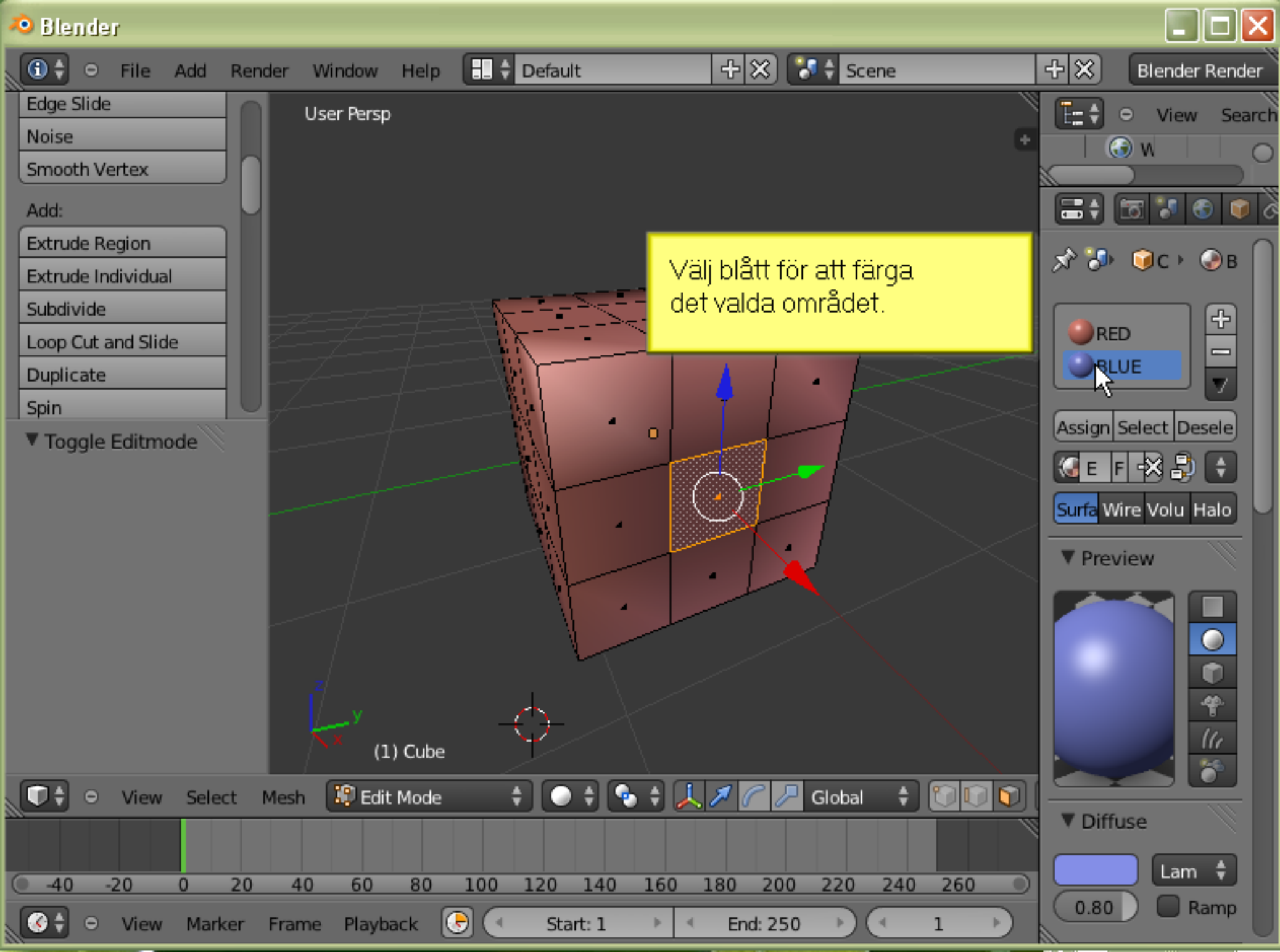
Klicka knappen  
Face select  
för att välja ett område

Face select - Shift-Click for multiple modes

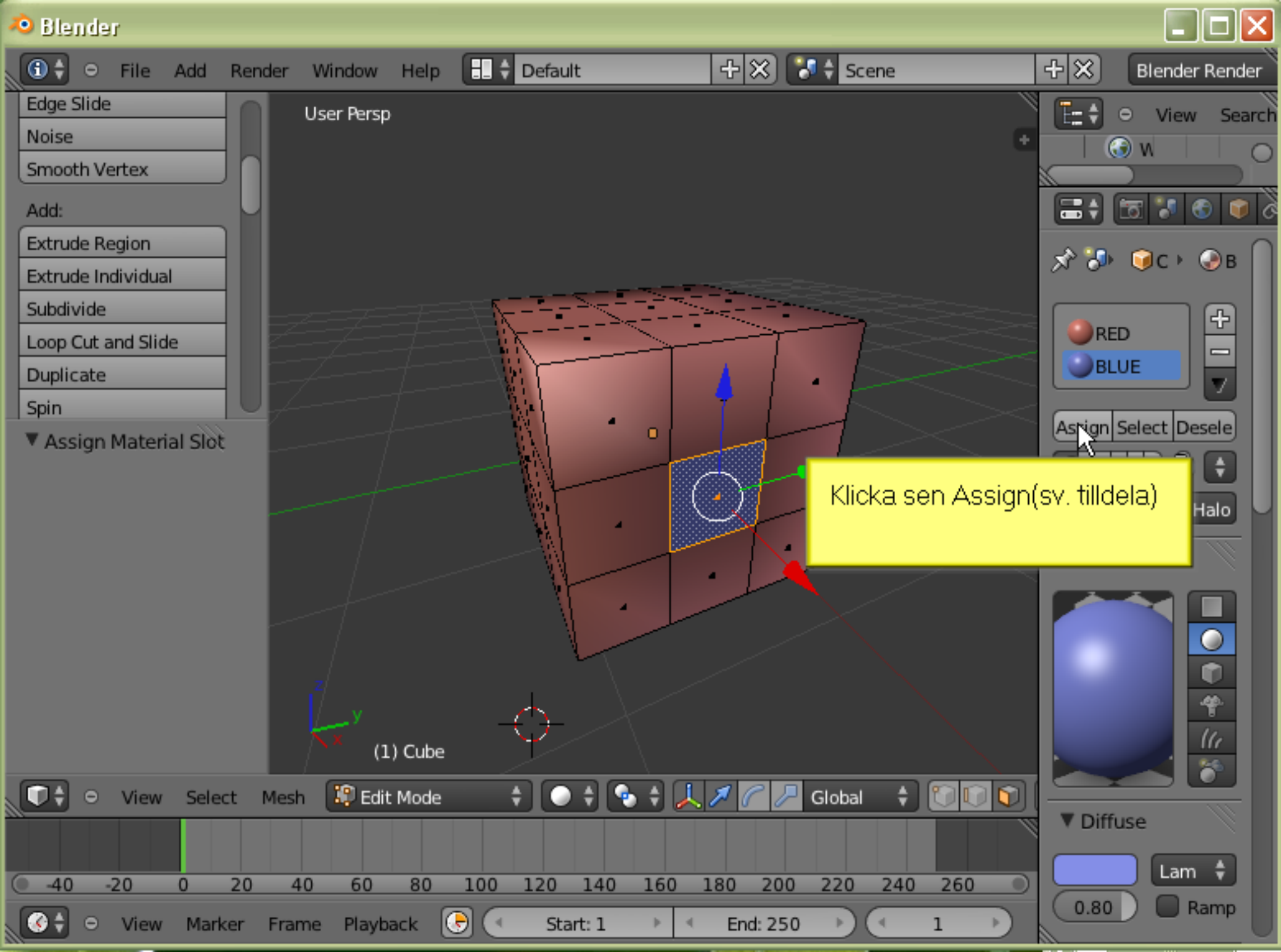
View Select Mesh Edit Mode

View Marker Frame Playback Start: 1 End: 250 1









- Edge Slide
- Noise
- Smooth Vertex
- Add:
- Extrude Region
- Extrude Individual
- Subdivide
- Loop Cut and Slide
- Duplicate
- Spin

Assign Material Slot

User Persp

View Search

W

C B

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

RED BLUE

Assign Select Desele

(1) Cube

View Select Mesh Edit Mode Global

Start: 1 End: 250 1

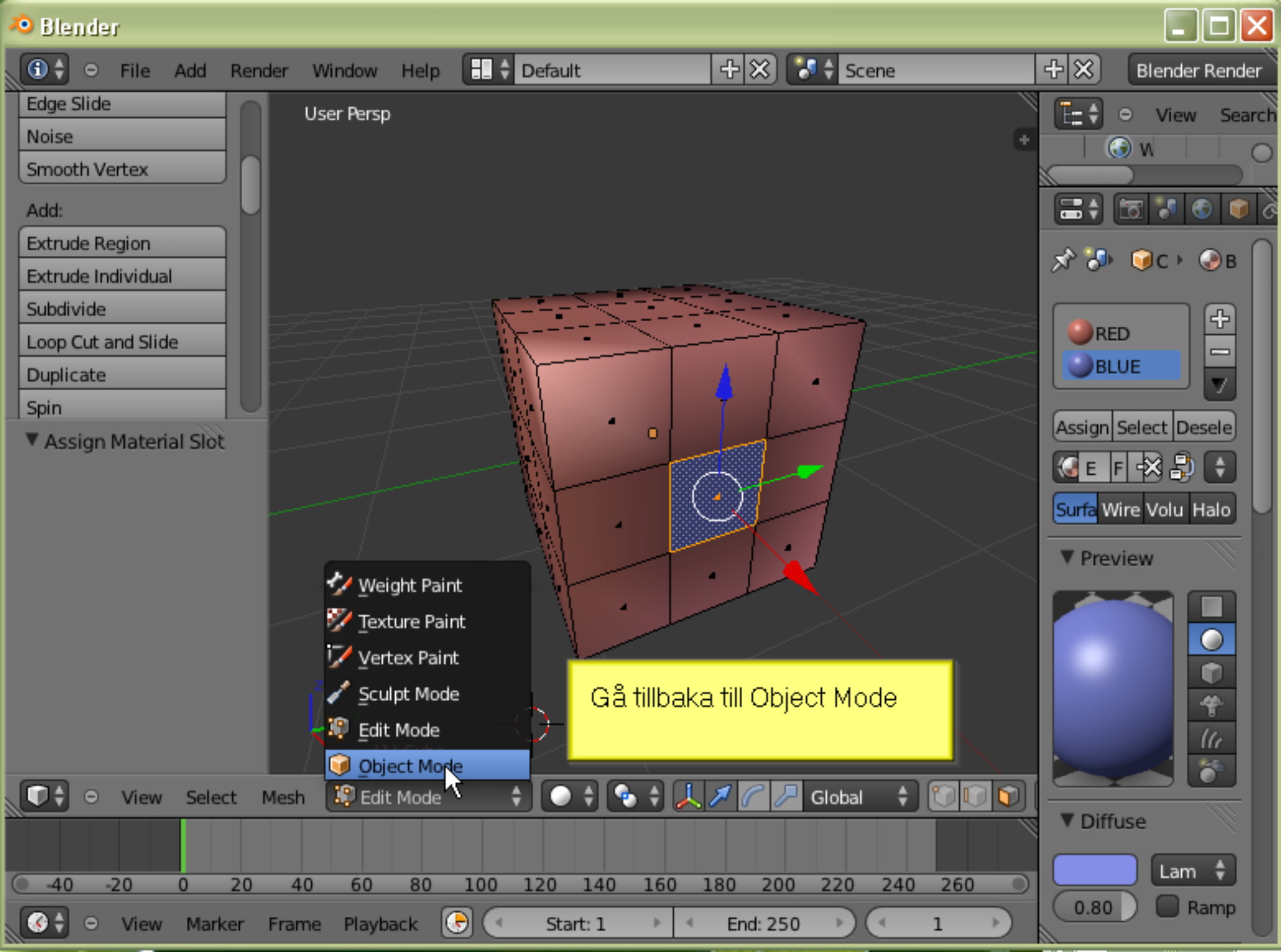
View Marker Frame Playback

Start: 1 End: 250 1

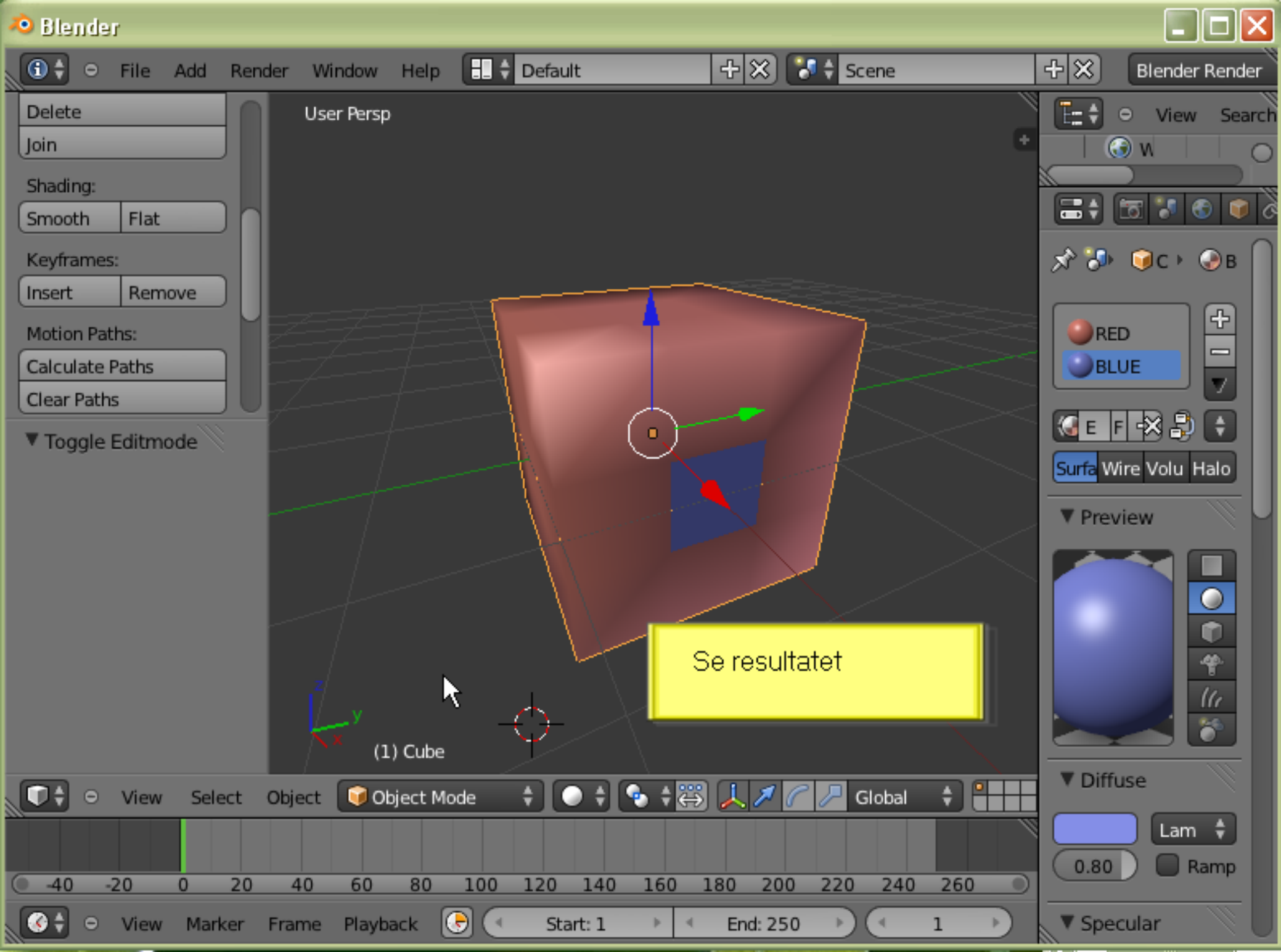
View Marker Frame Playback

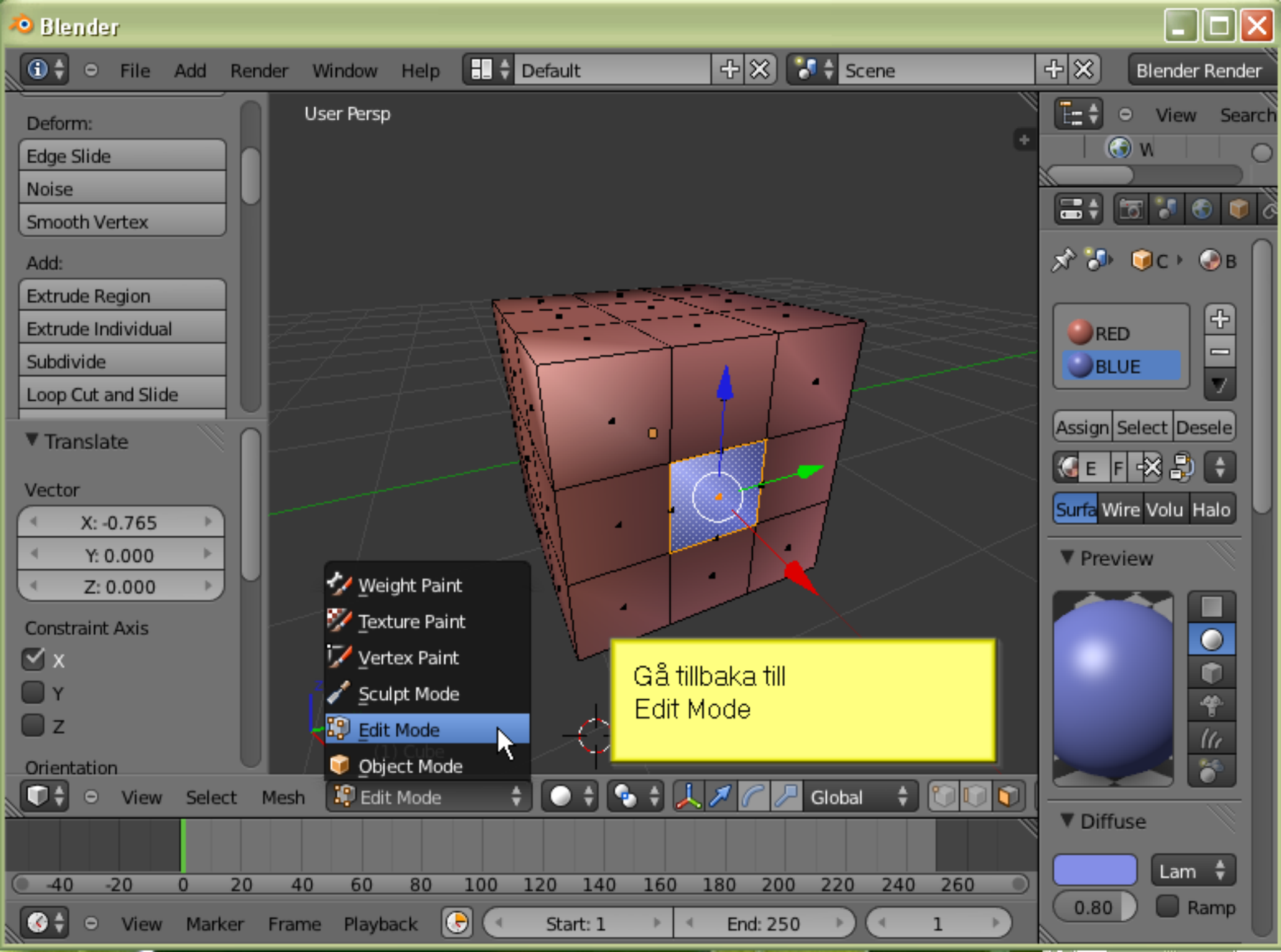
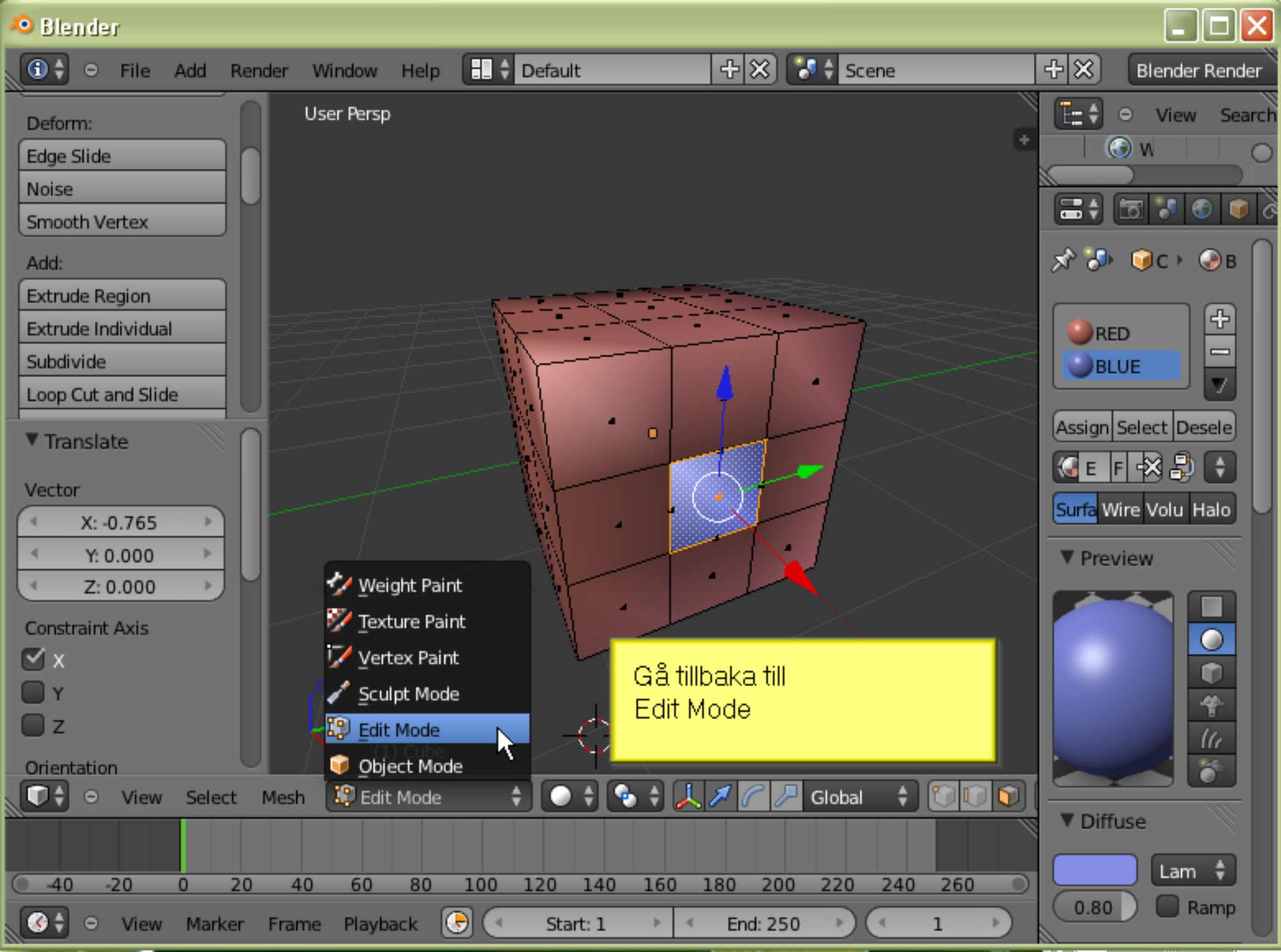
Start: 1 End: 250 1

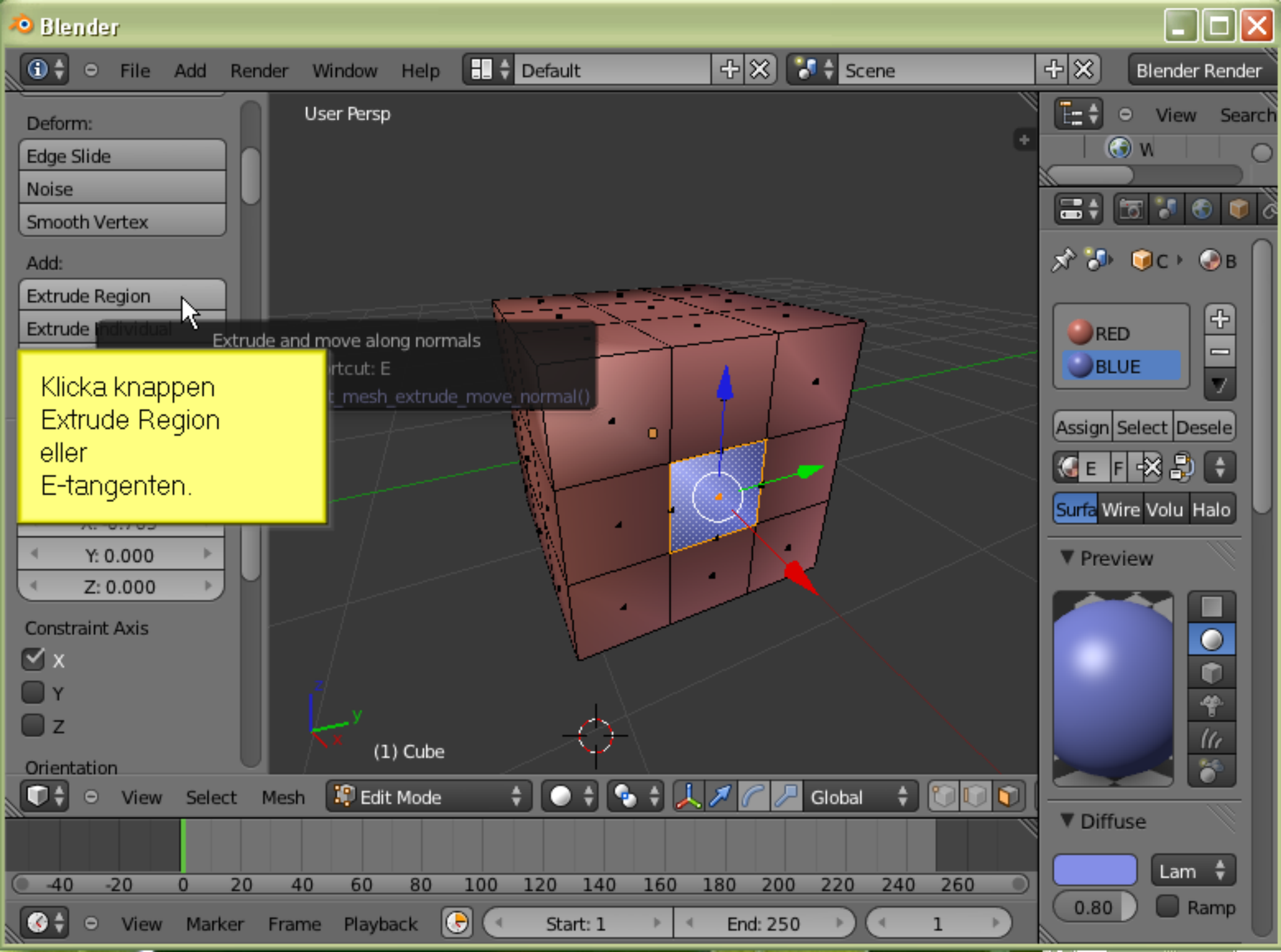




Gå tillbaka till Object Mode







Deform:

Edge Slide

Noise

Smooth Vertex

Add:

Extrude Region

Extrude Individual

Extrude and move along normals

Shortcut: E

mesh\_extrude\_move\_normal()

Klicka knappen  
Extrude Region  
eller  
E-tangenten.

X: 0.000

Y: 0.000

Z: 0.000

Constraint Axis

☒ X

☐ Y

☐ Z

Orientation

☒ View

☐ Select

☐ Mesh

☒ Edit Mode

(1) Cube

☒ View

☐ Marker

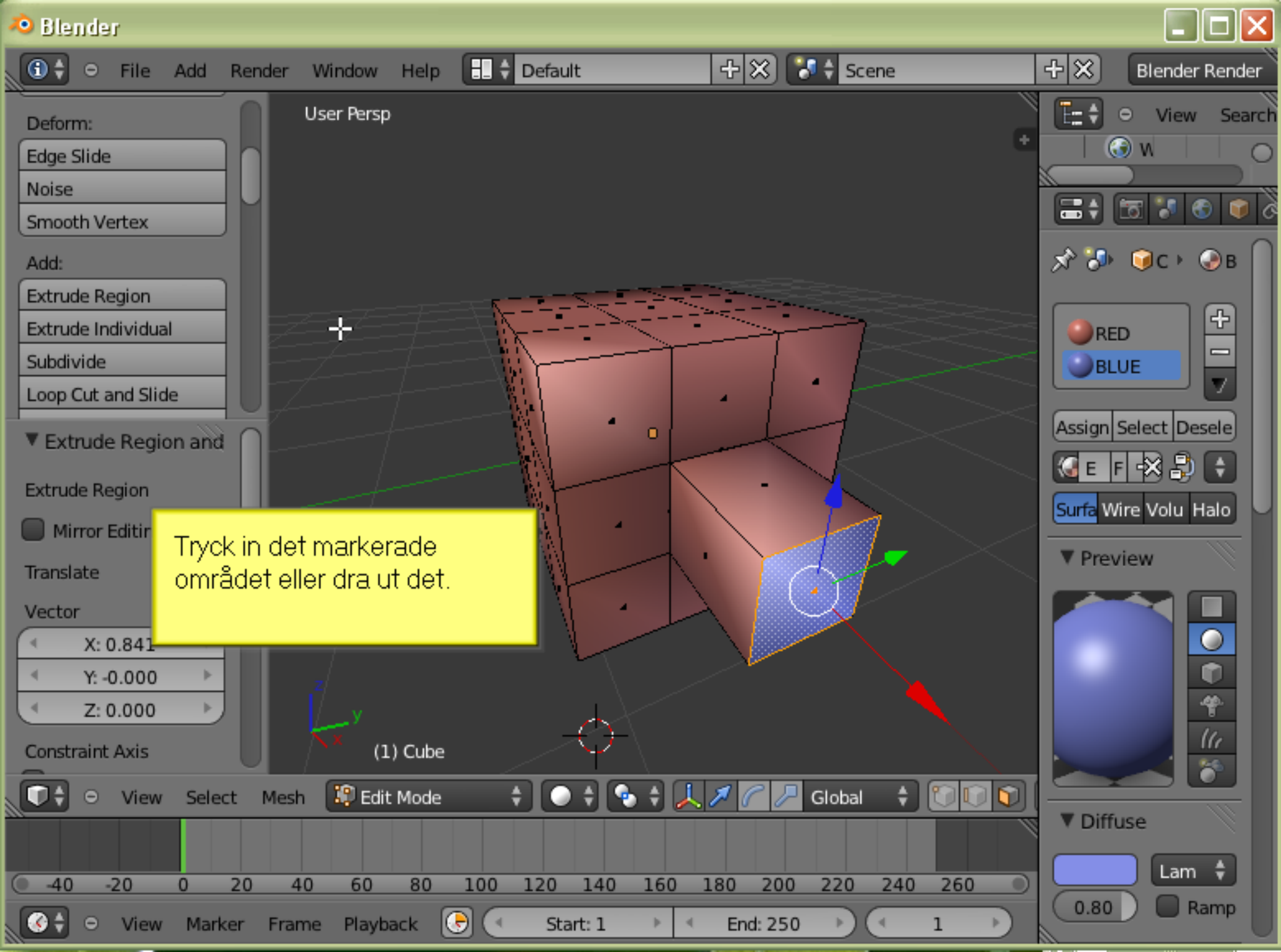
☐ Frame

☐ Playback

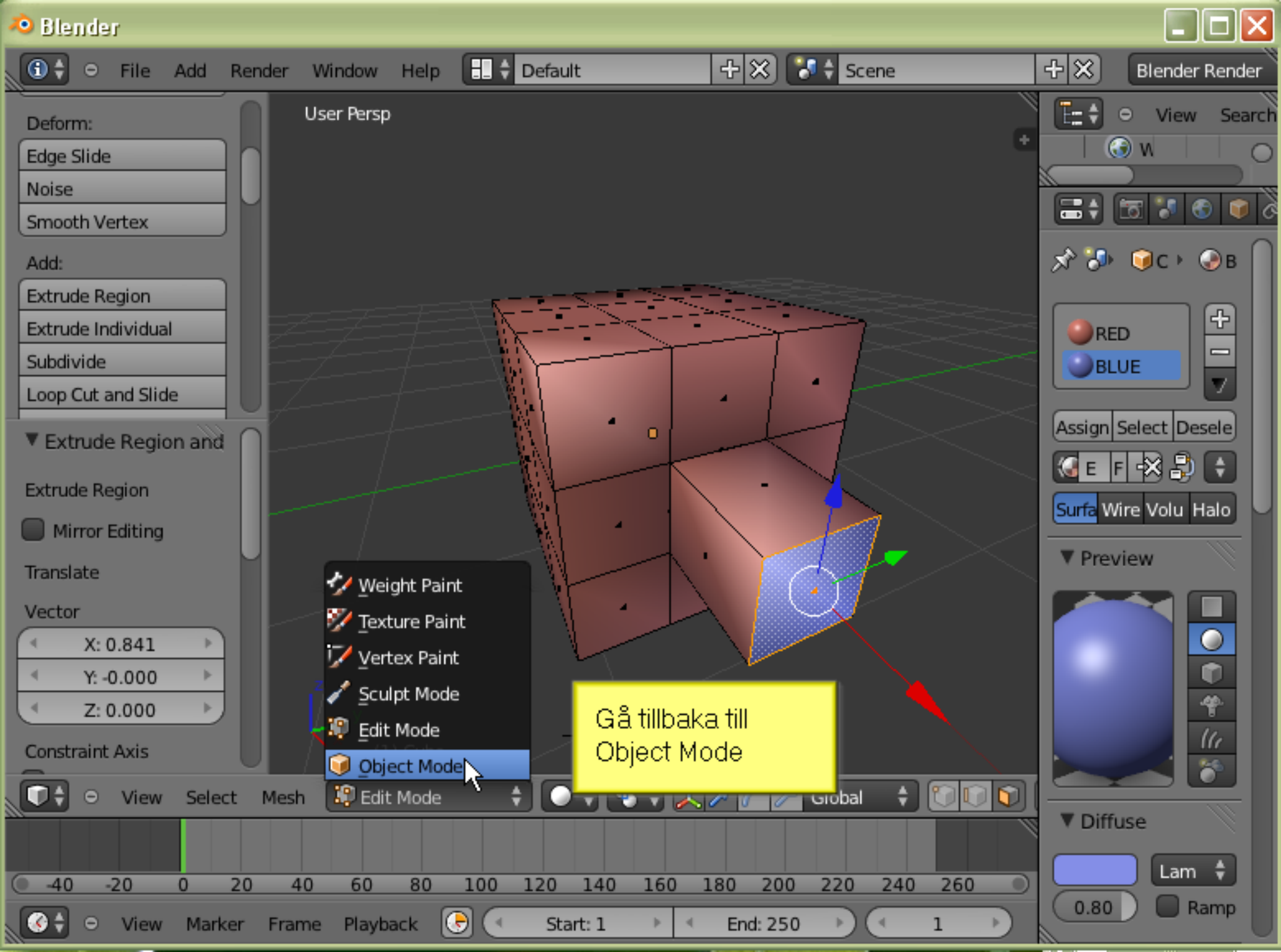
Start: 1

End: 250

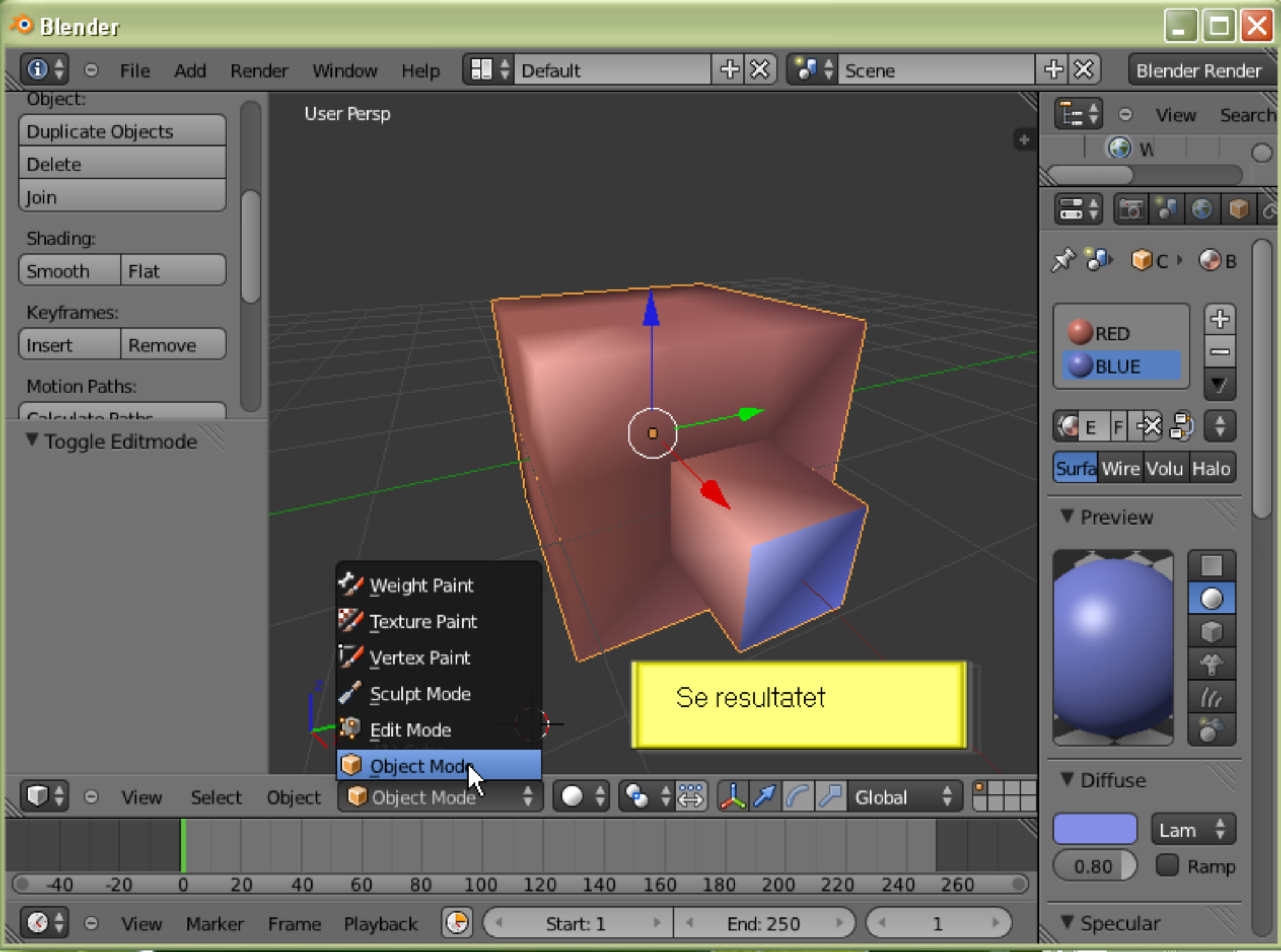
1



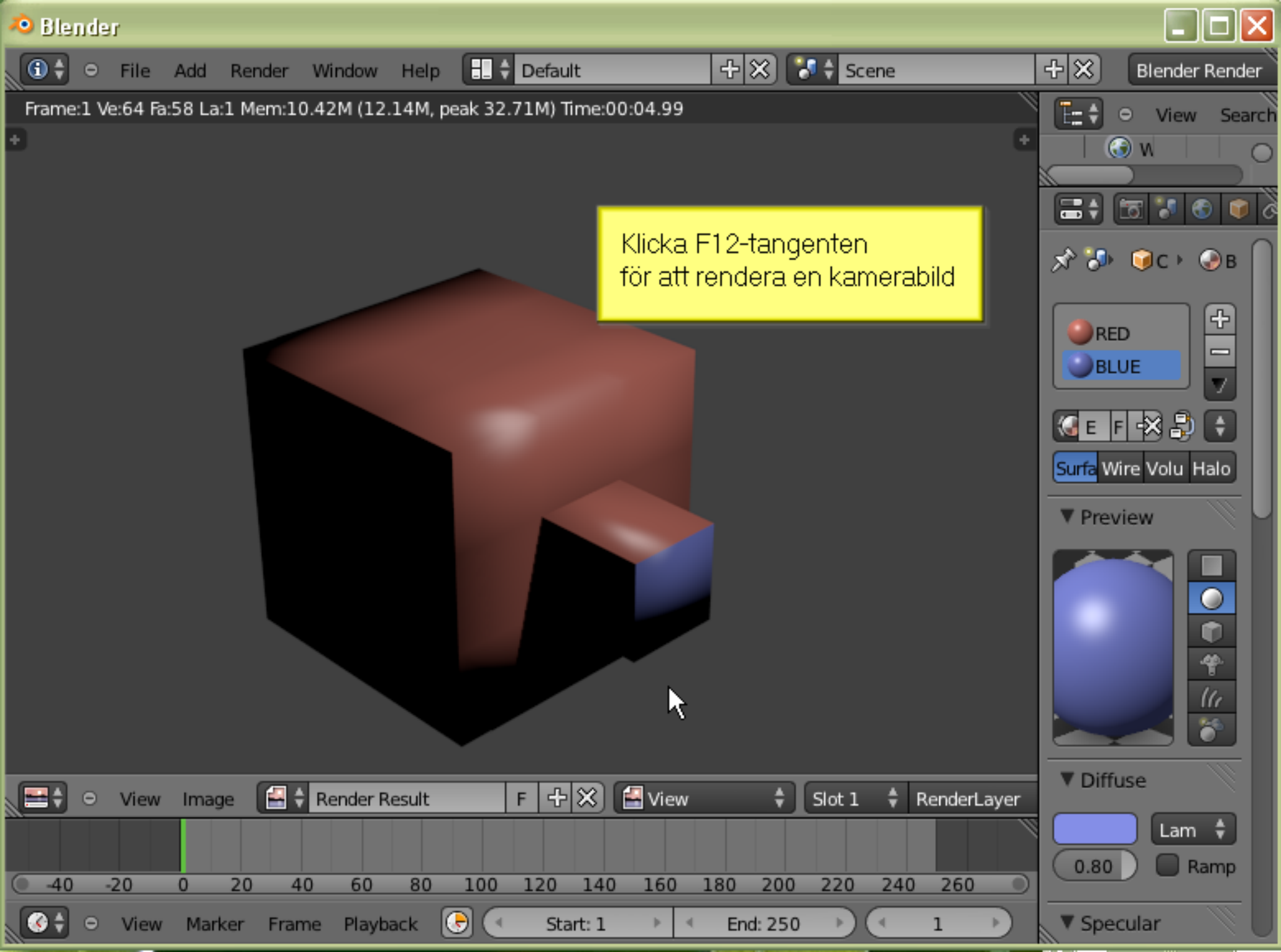
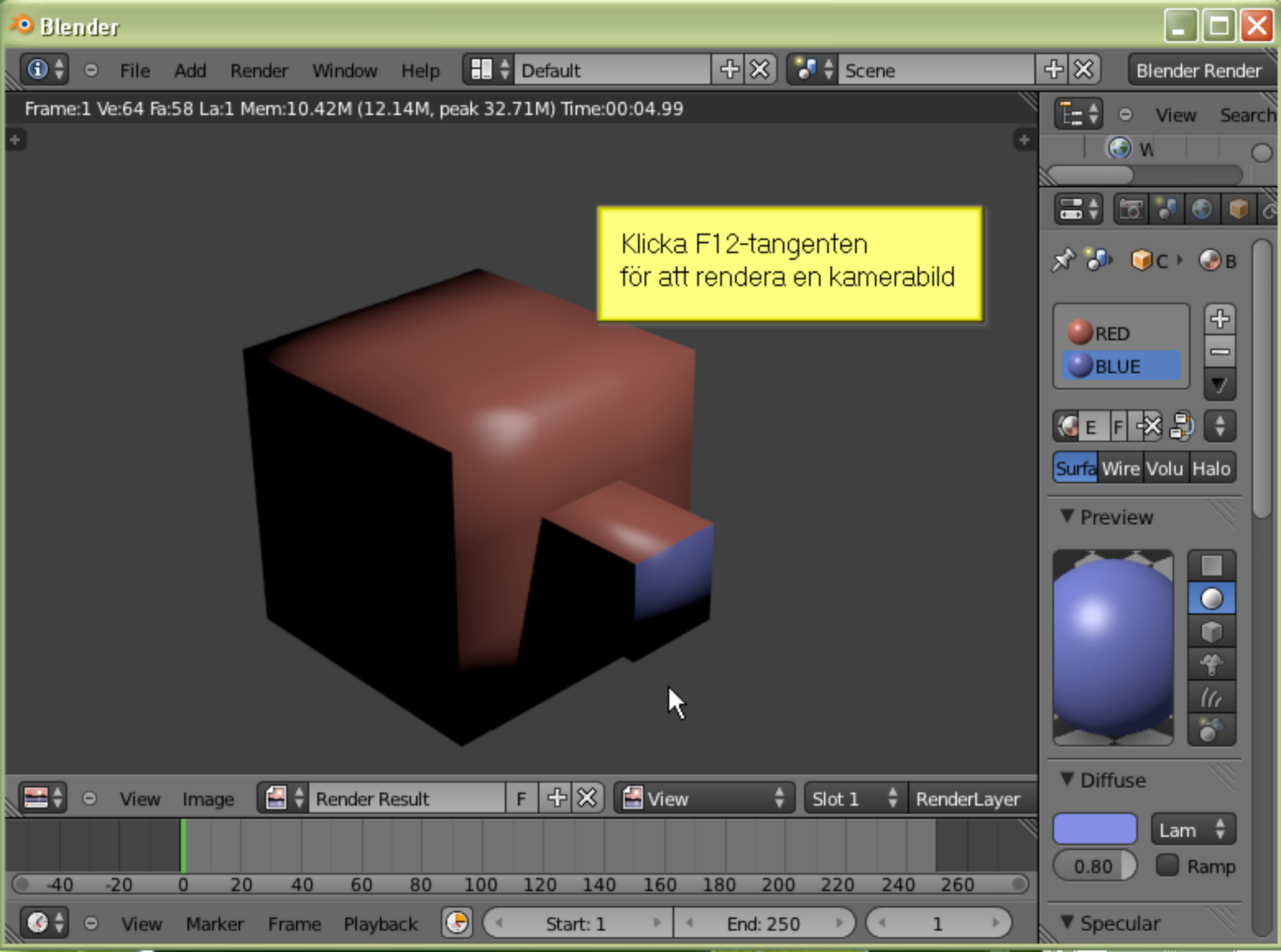
Tryck in det markerade  
området eller dra ut det.

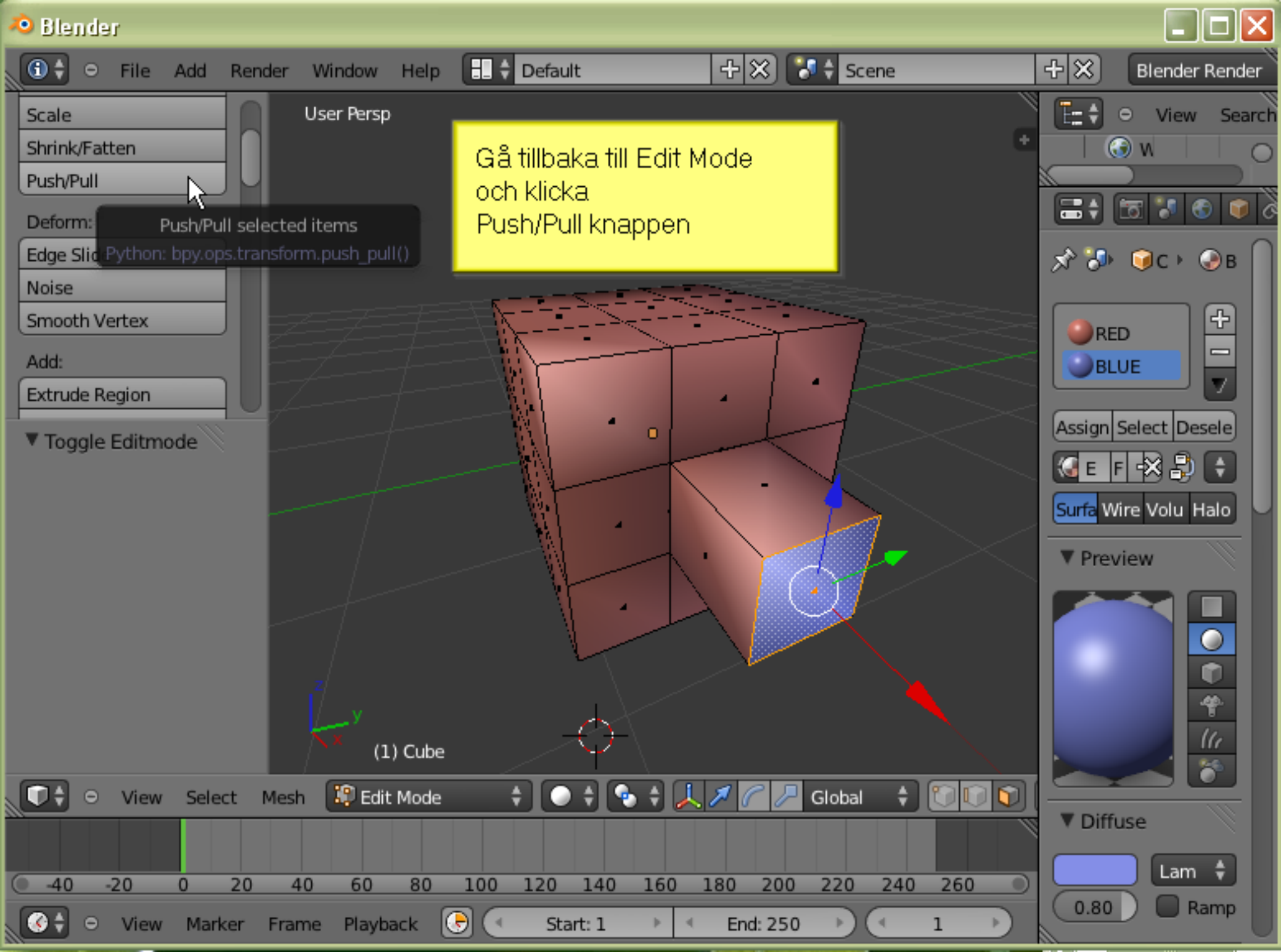


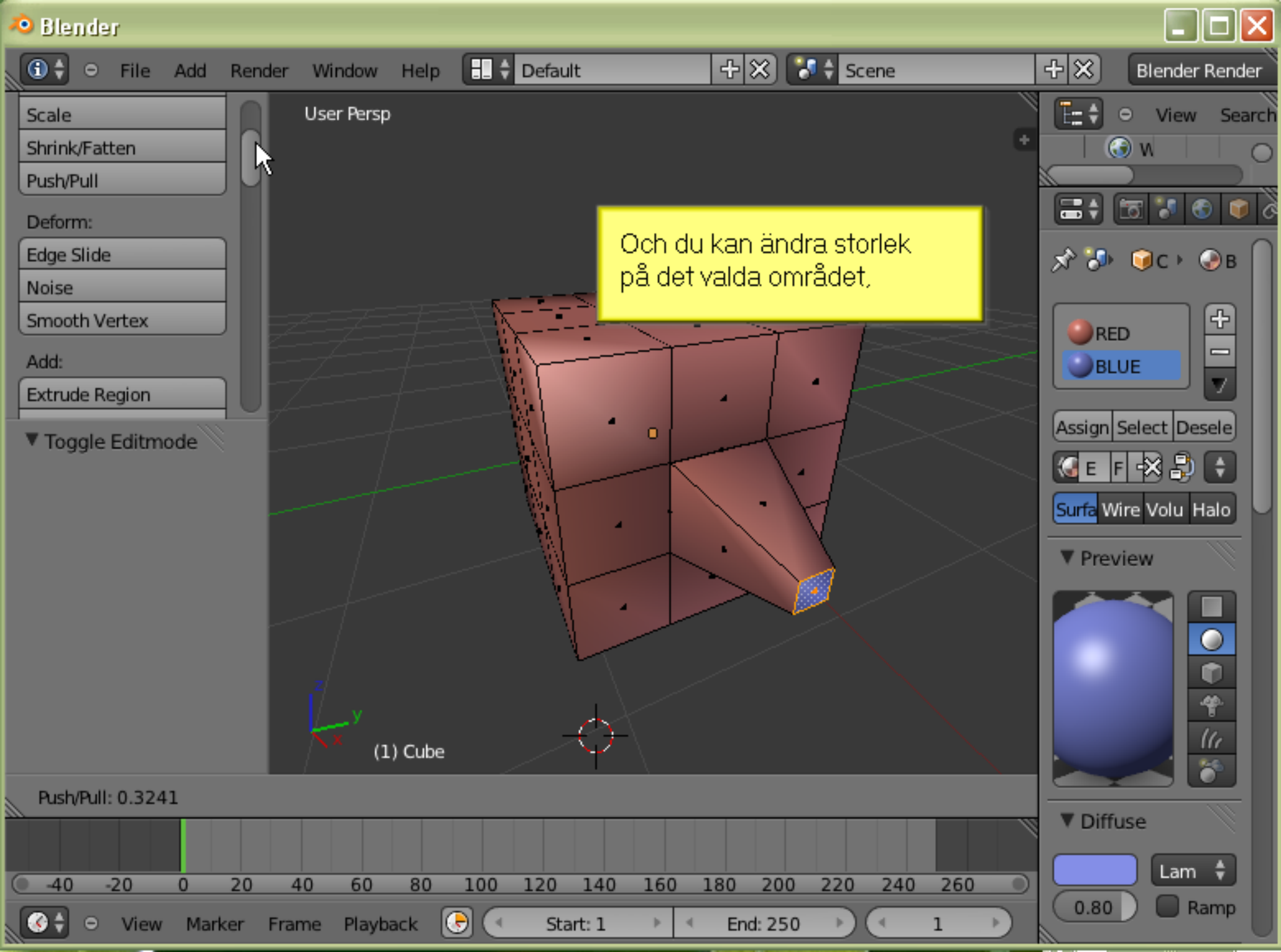












Och du kan ändra storlek  
på det valda området.

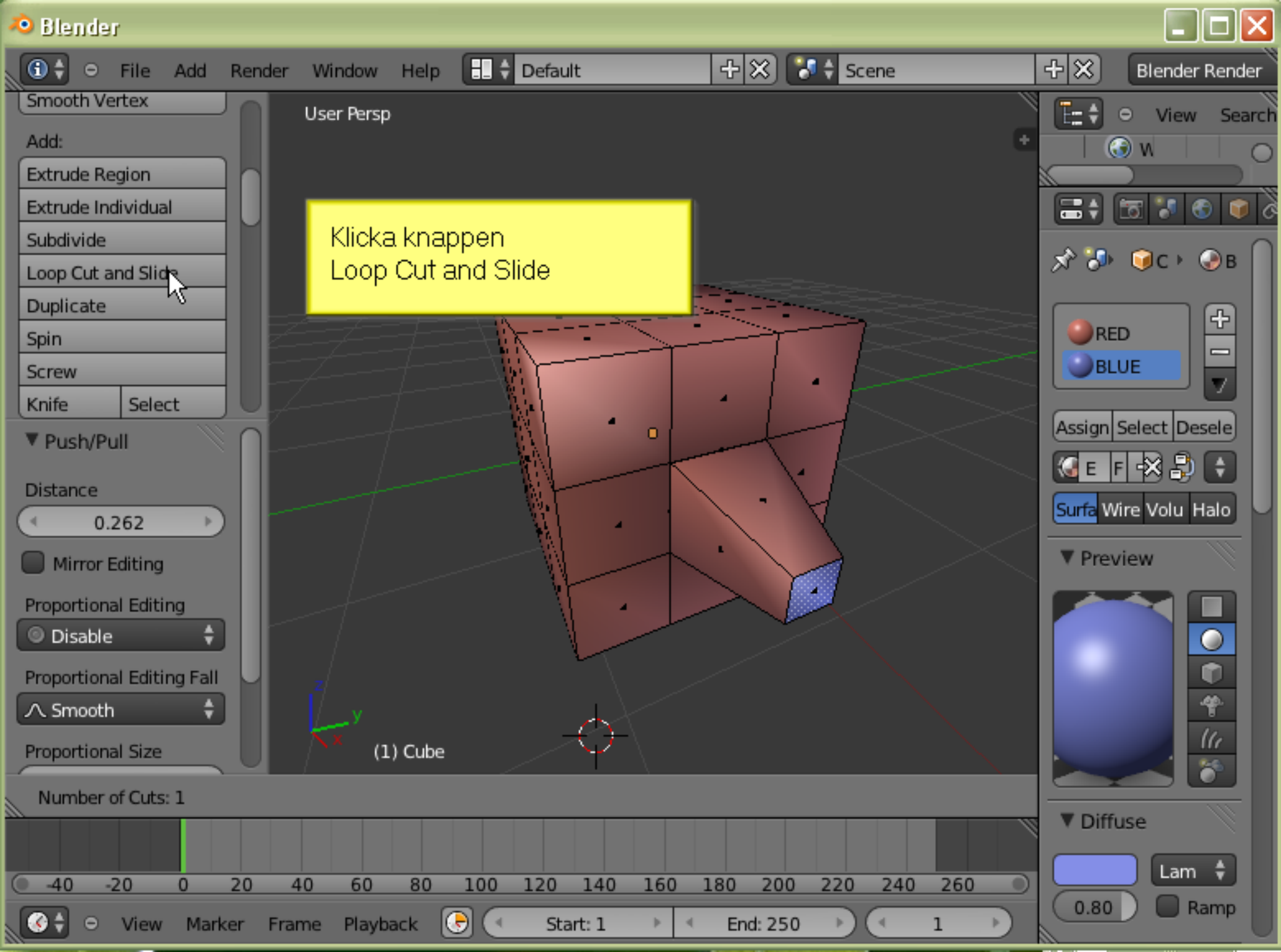
(1) Cube

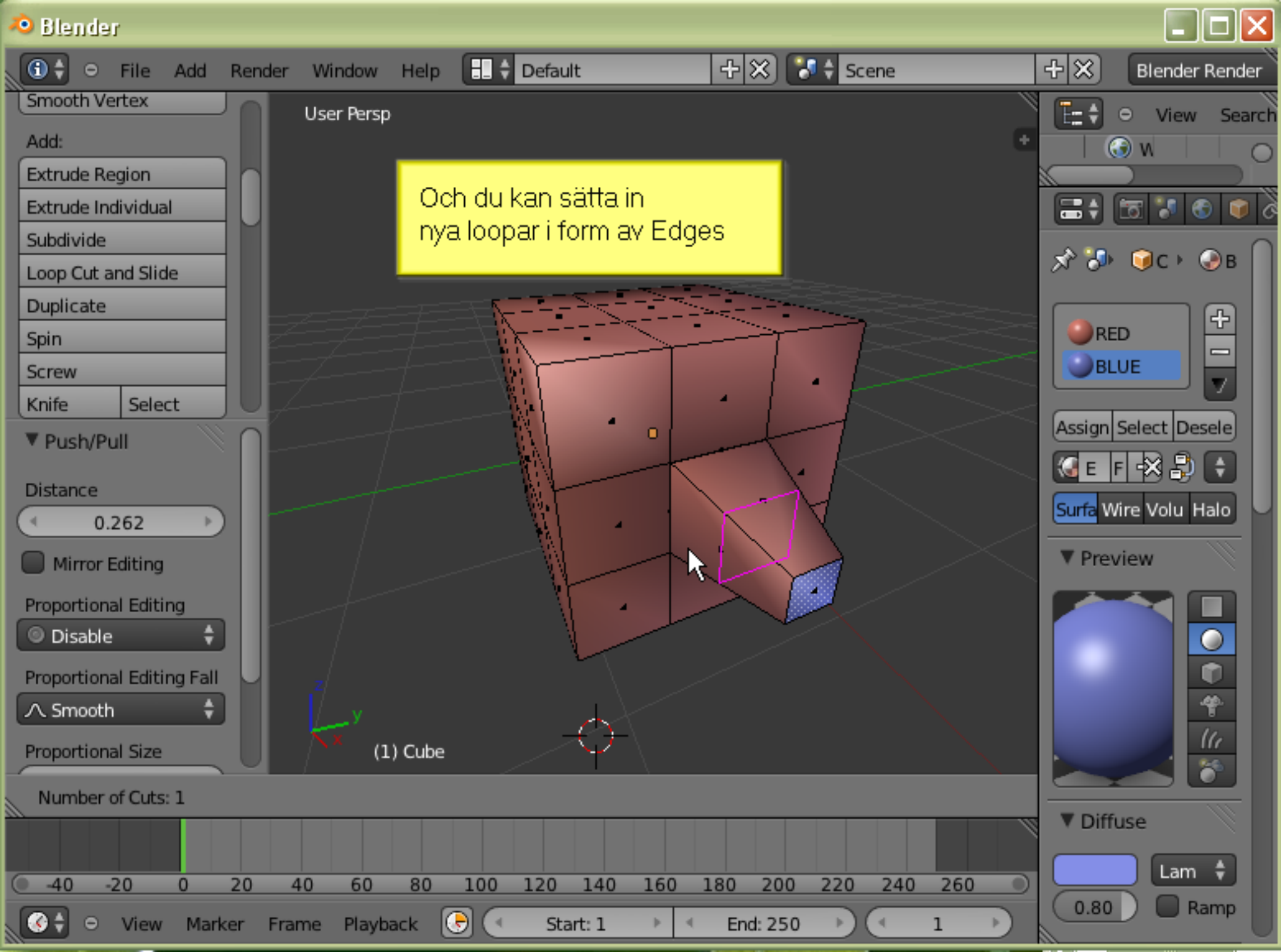
Push/Pull: 0.3241

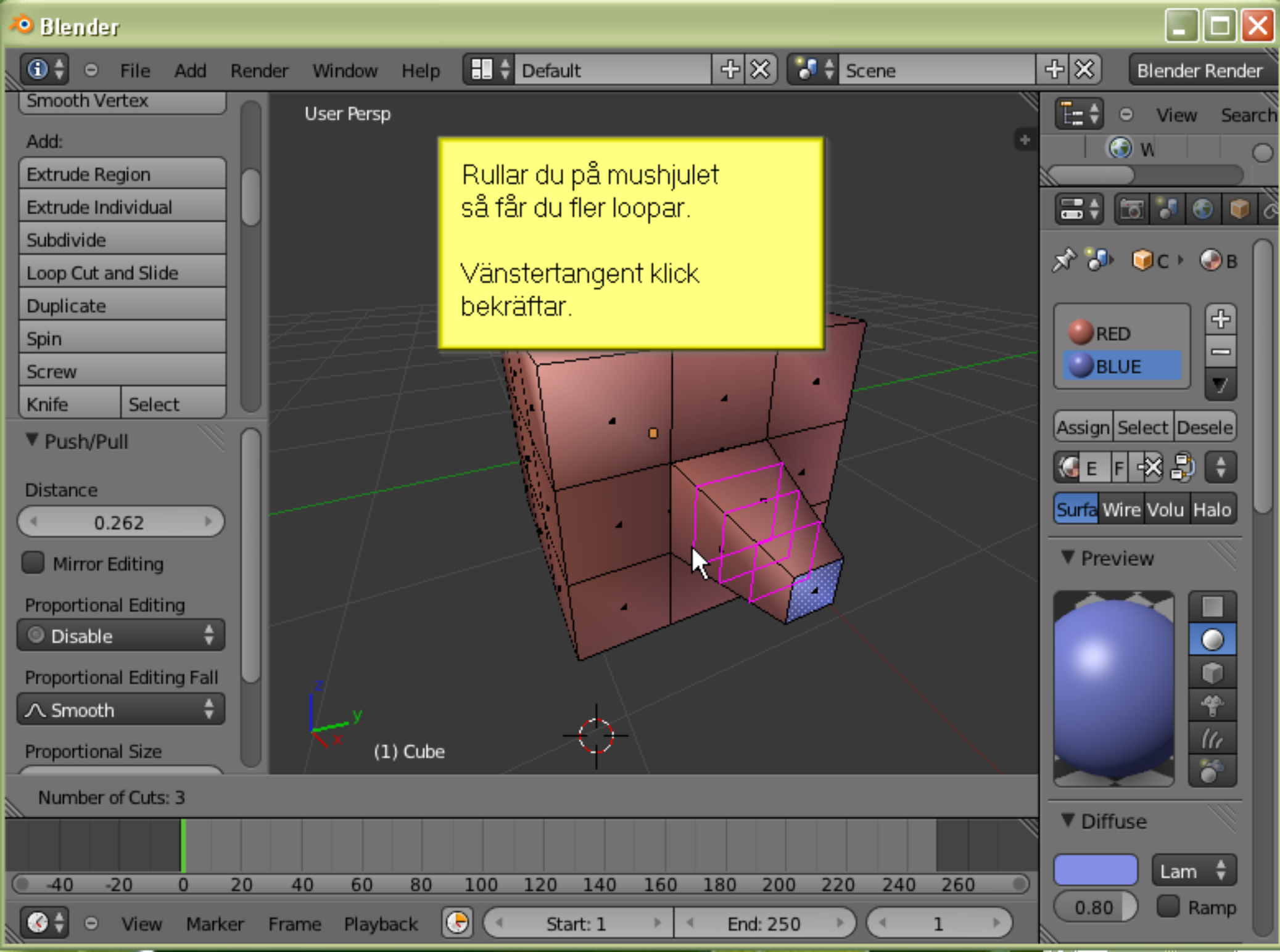
Start: 1

End: 250

1







Rullar du på mushjulet  
så får du fler loopar.

Vänstertangent klick  
bekräftar.

(1) Cube

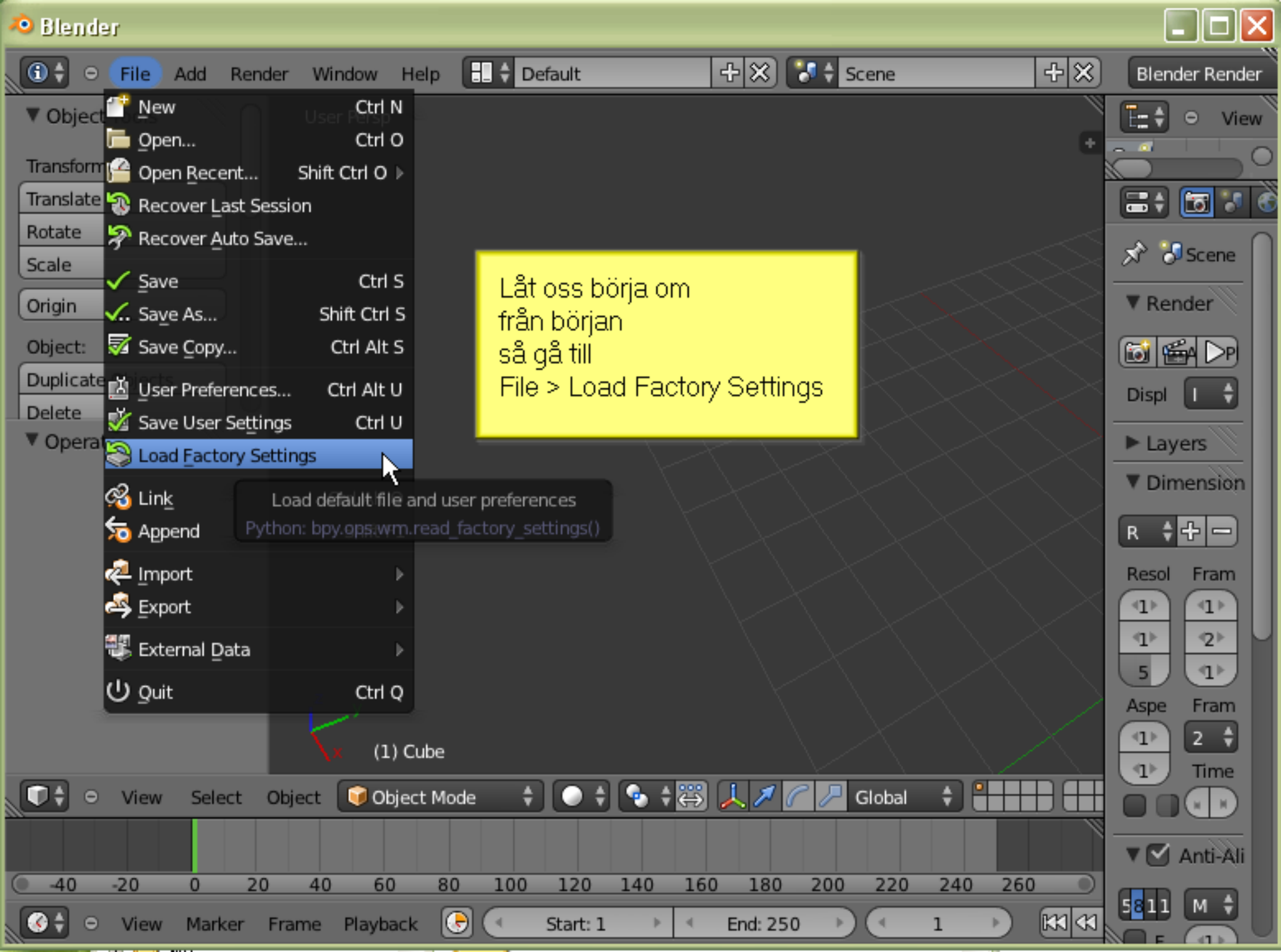
Number of Cuts: 3

Start: 1

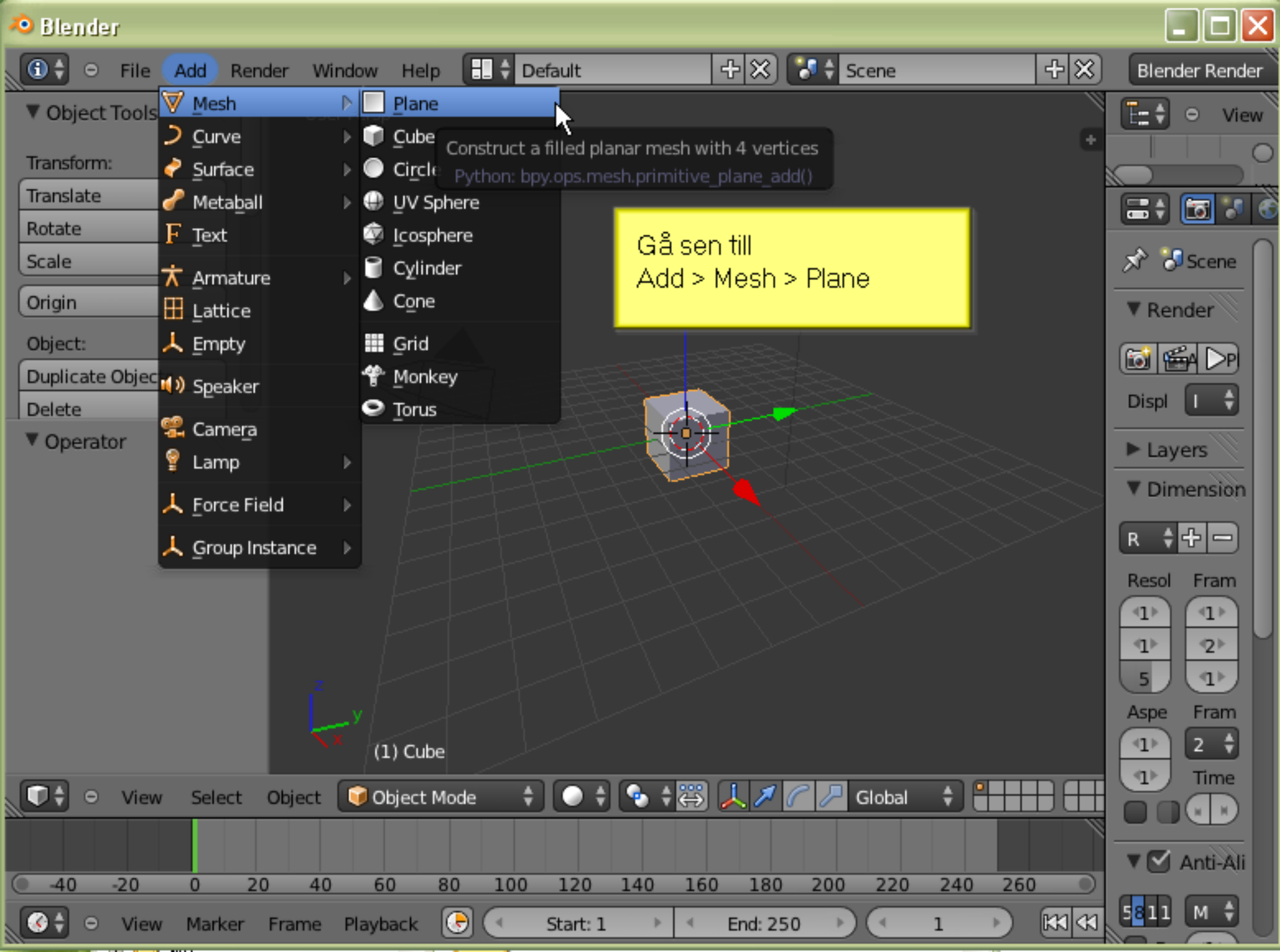
End: 250

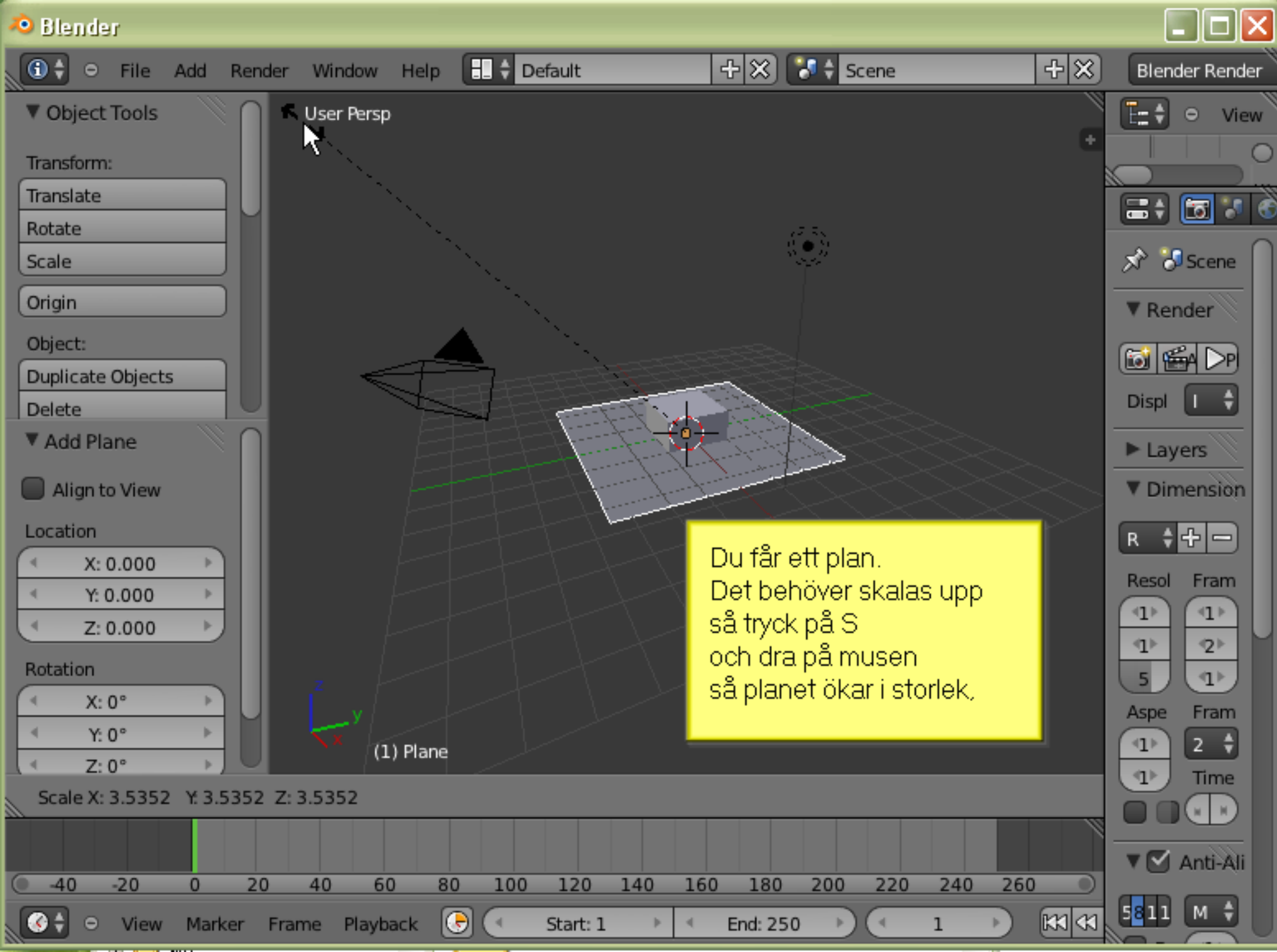
1

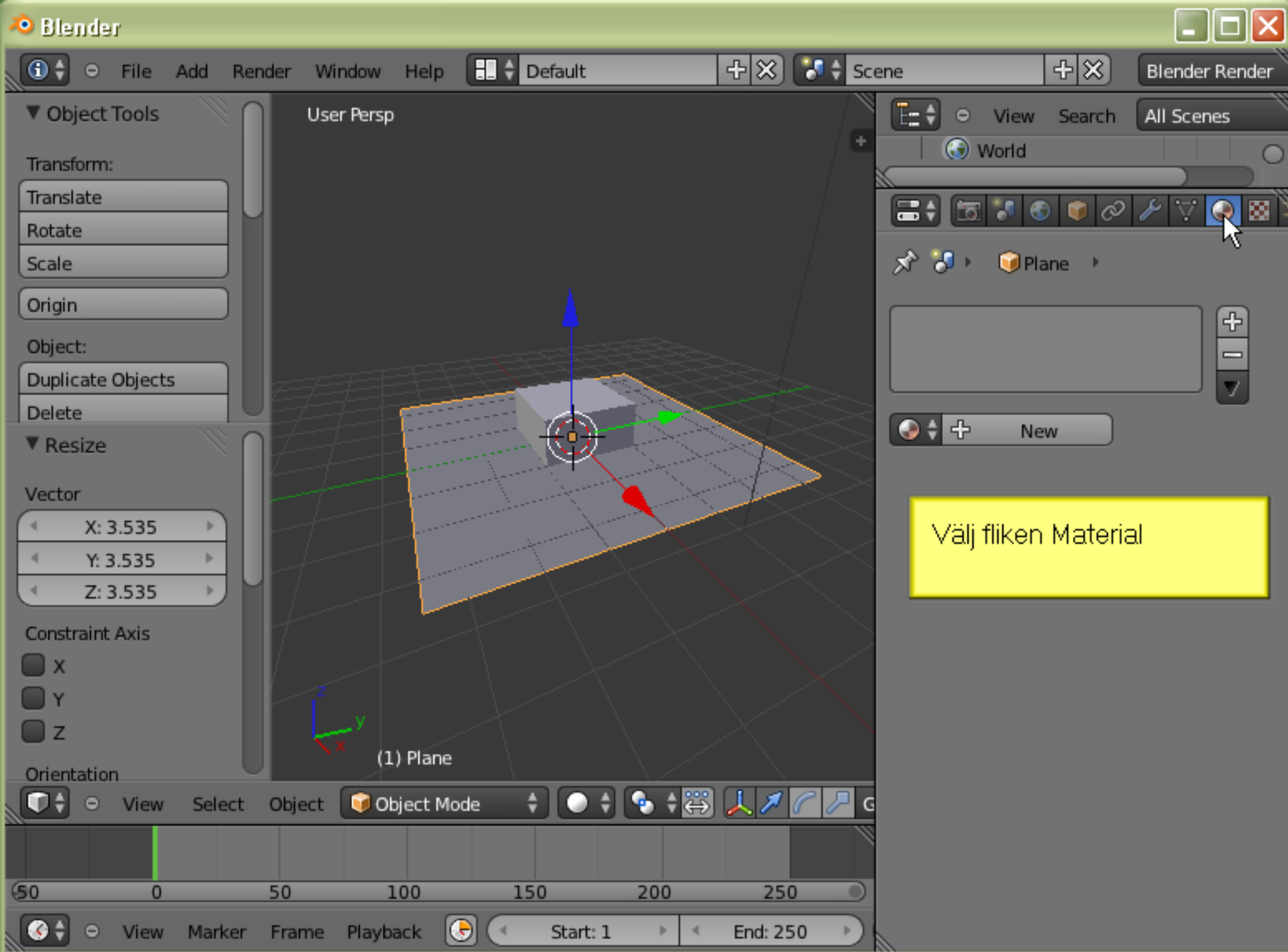


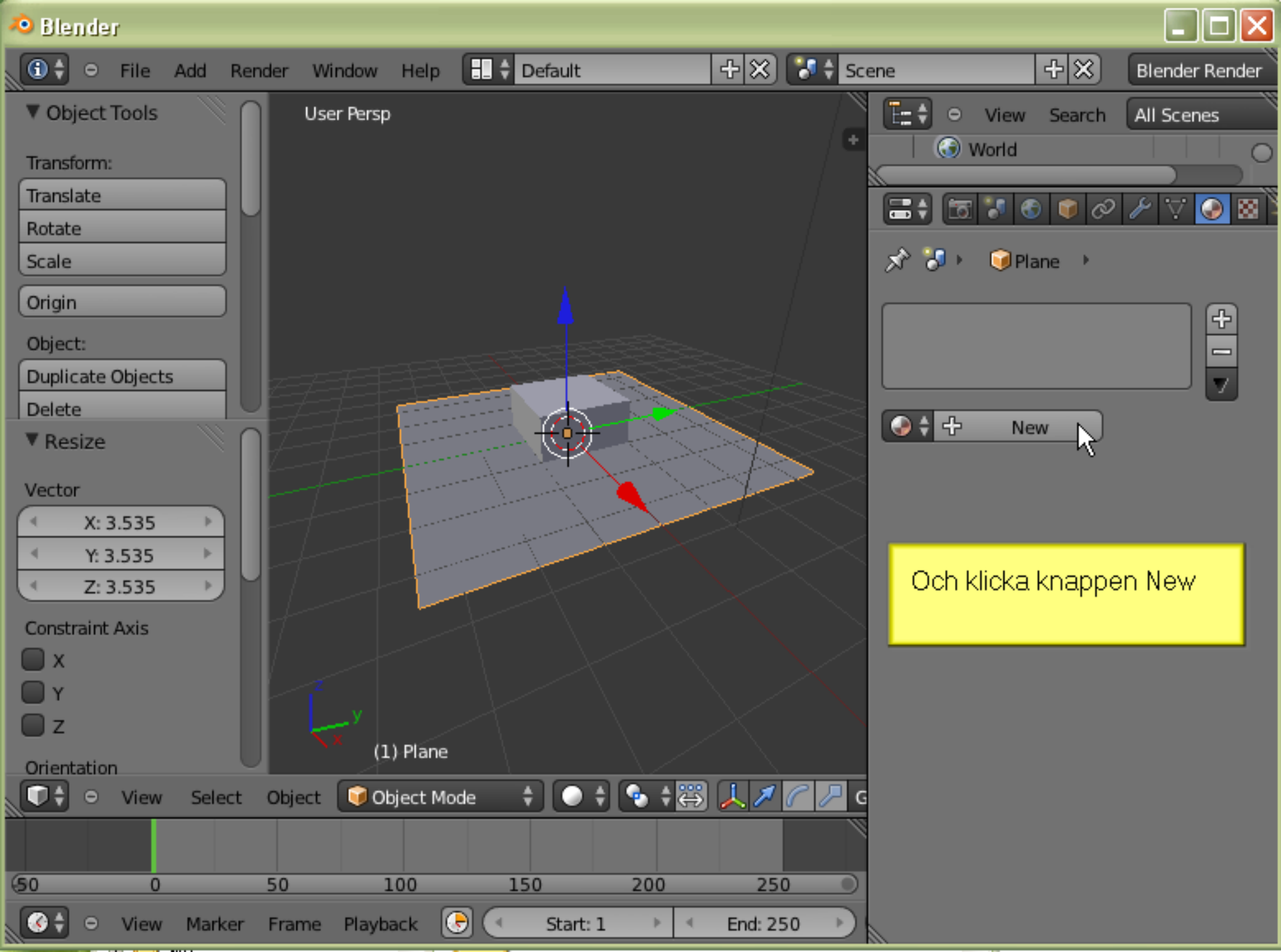












Blender

File Add Render Window Help

Default

Scene

Blender Render

Object Tools

Transform:

Translate

Rotate

Scale

Origin

Object:

Duplicate Objects

Delete

Resize

Vector

X: 3.535

Y: 3.535

Z: 3.535

Constraint Axis

X

Y

Z

Orientation

View Select Object Object Mode

View

Search

All Scenes

World

Plane

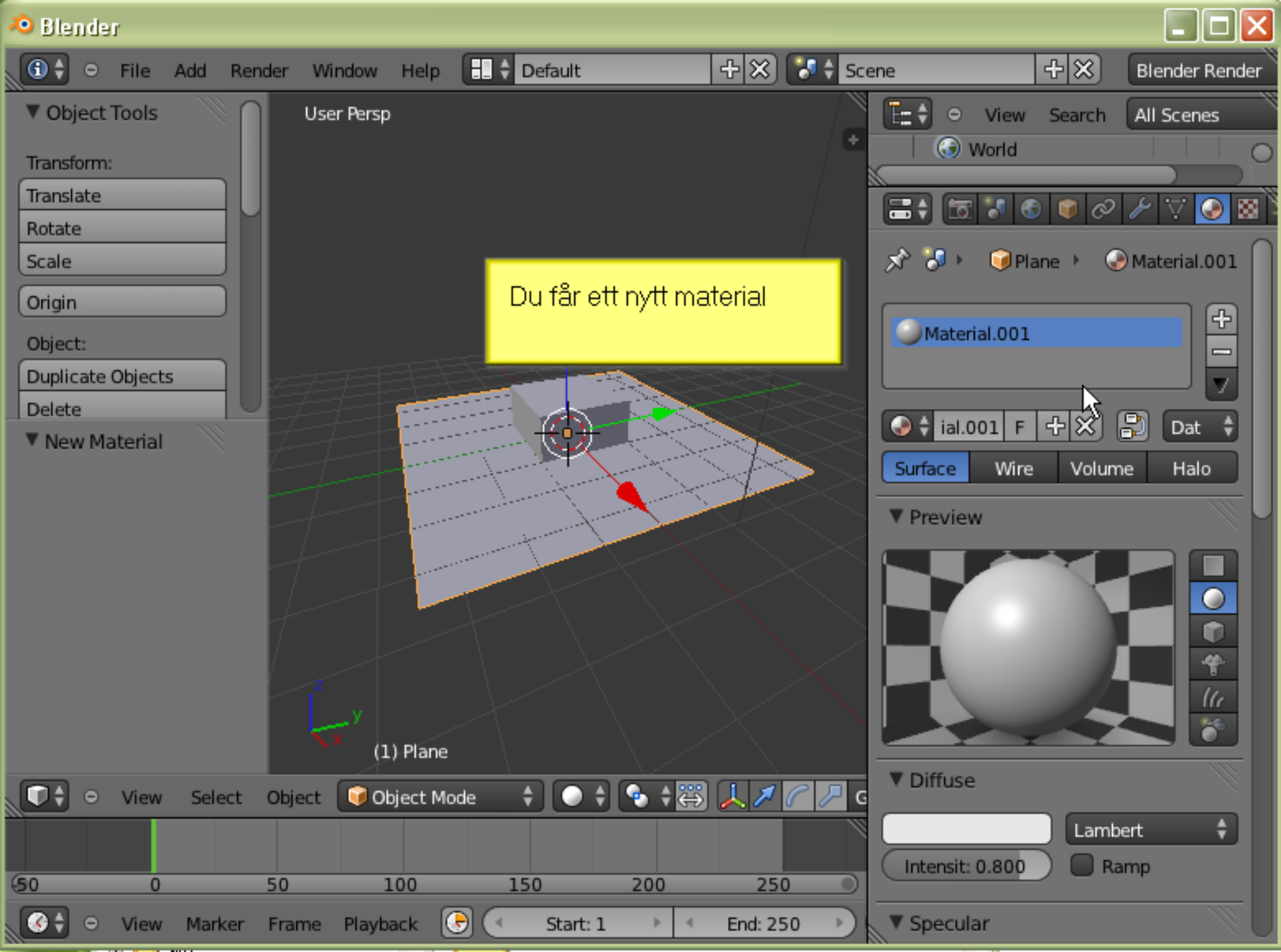
New

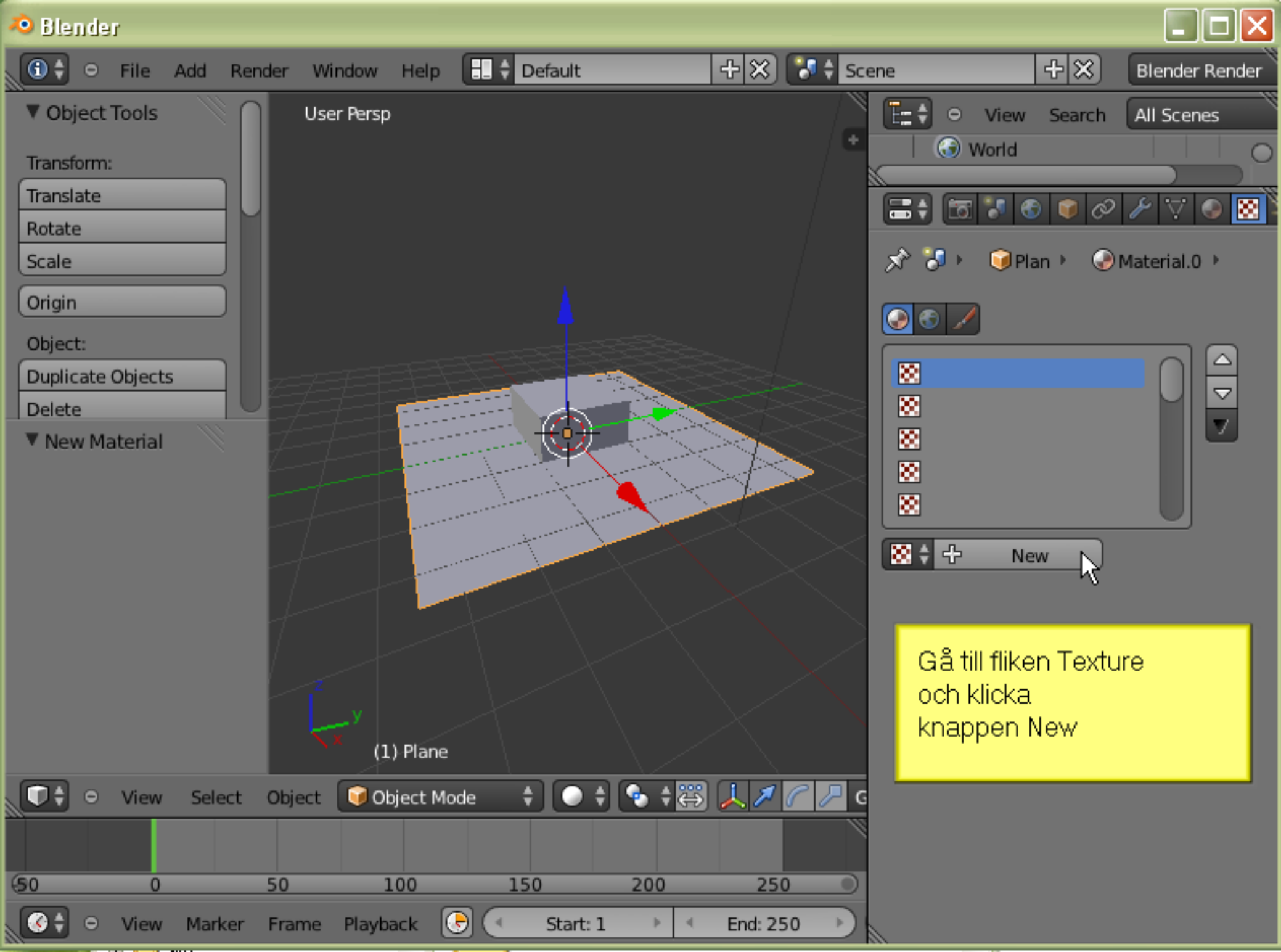
Och klicka knappen New

View Marker Frame Playback

Start: 1

End: 250





▼ Object Tools

Transform:

Translate

Rotate

Scale

Origin

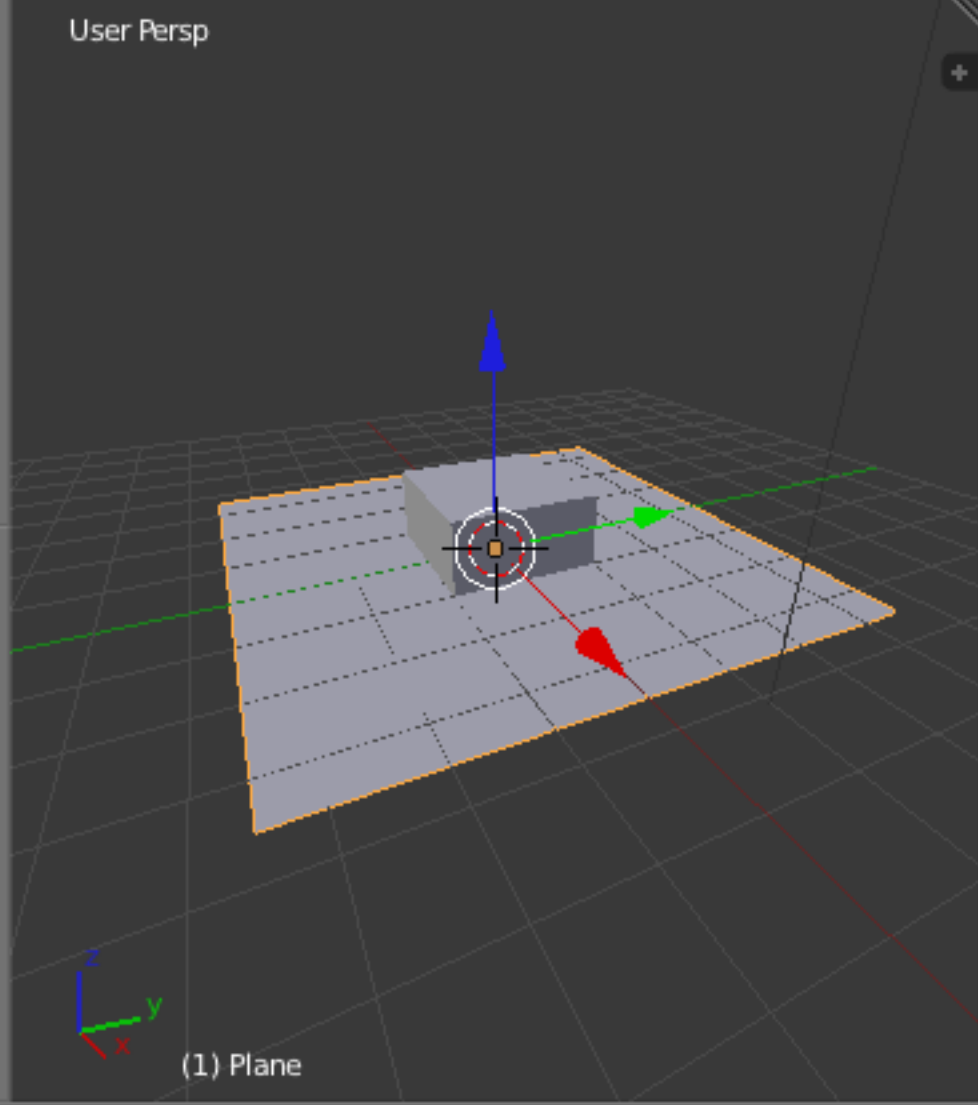
Object:

Duplicate Objects

Delete

▼ New Material

User Persp



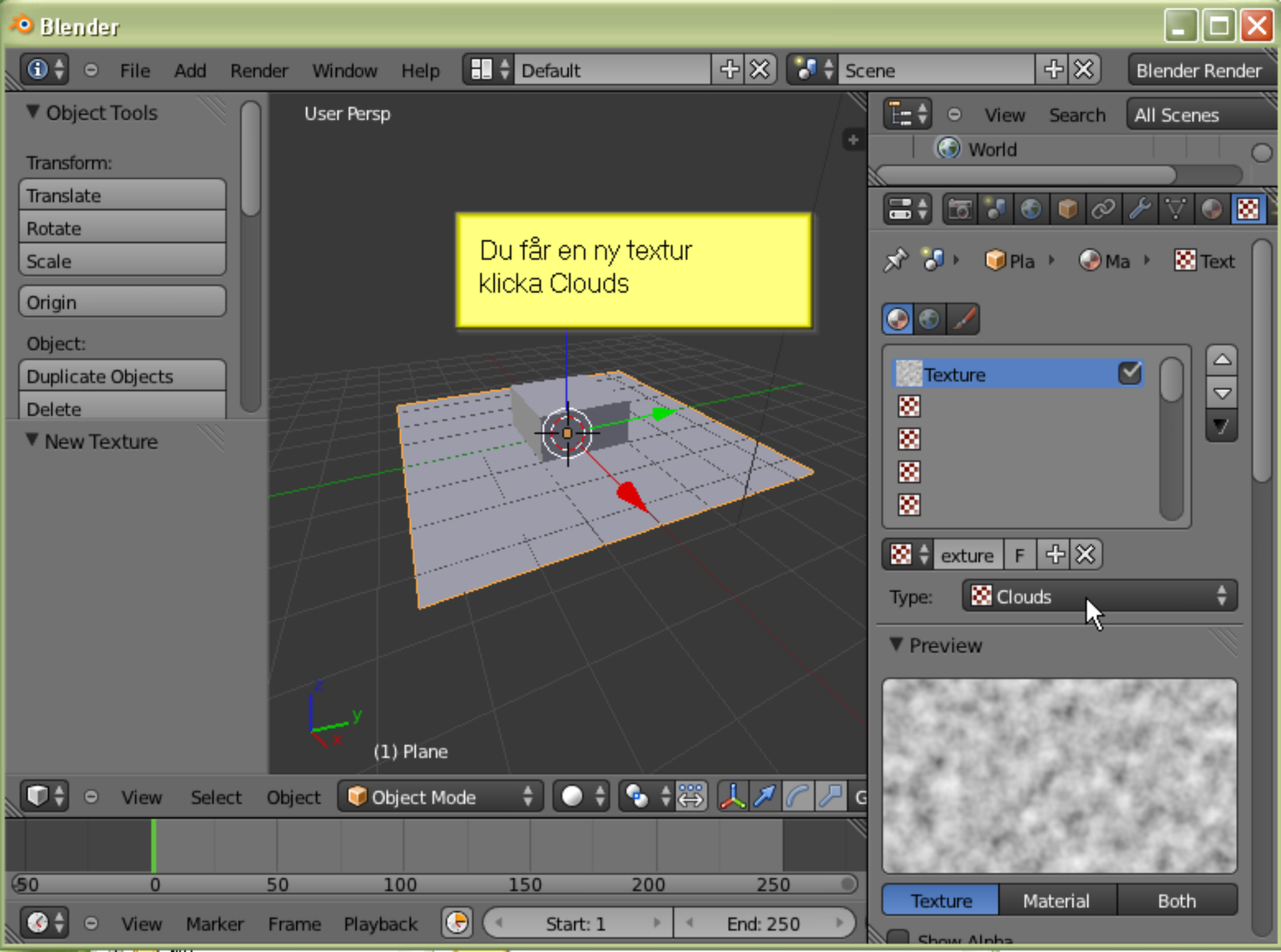
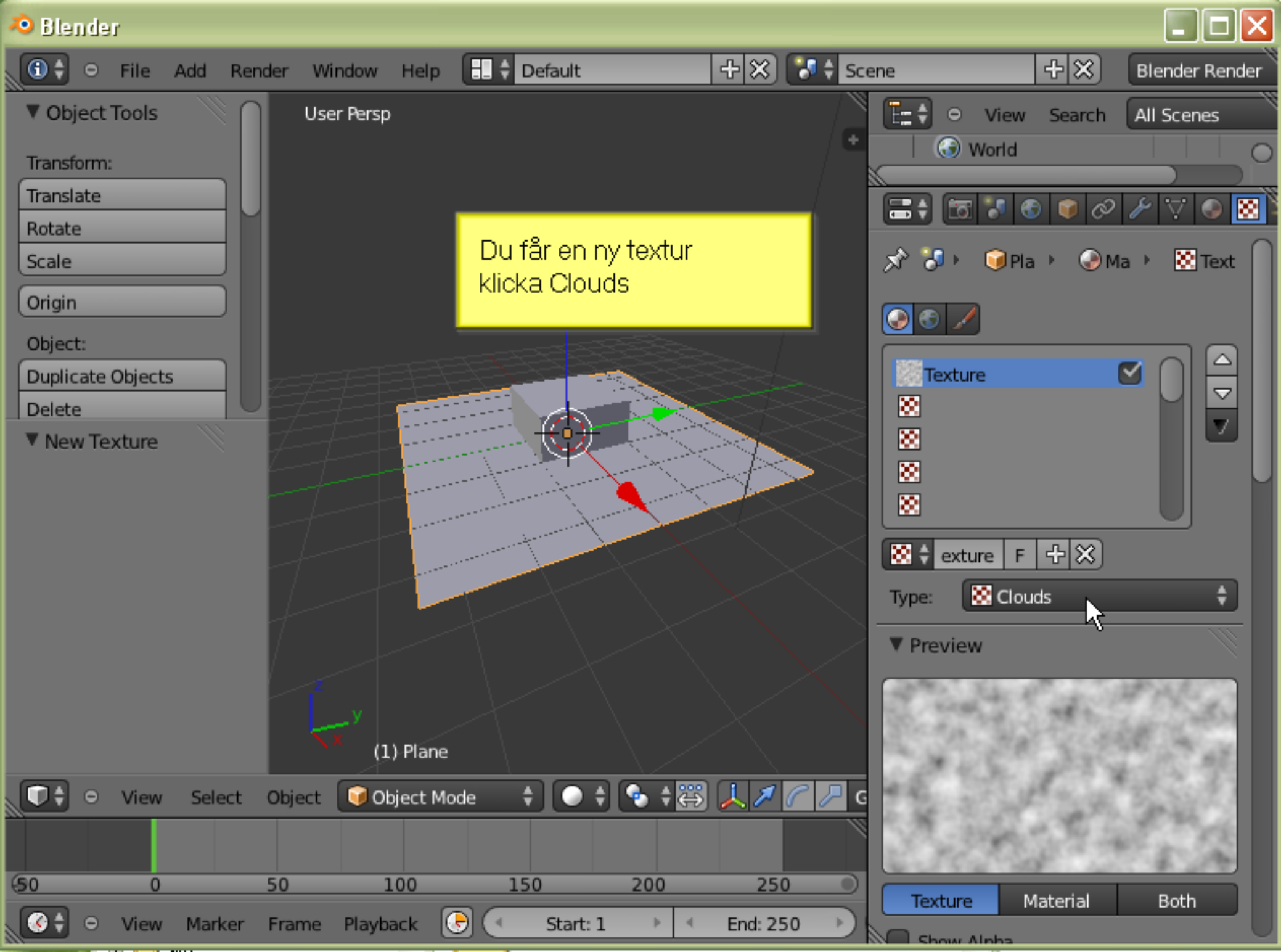
View Search All Scenes

World

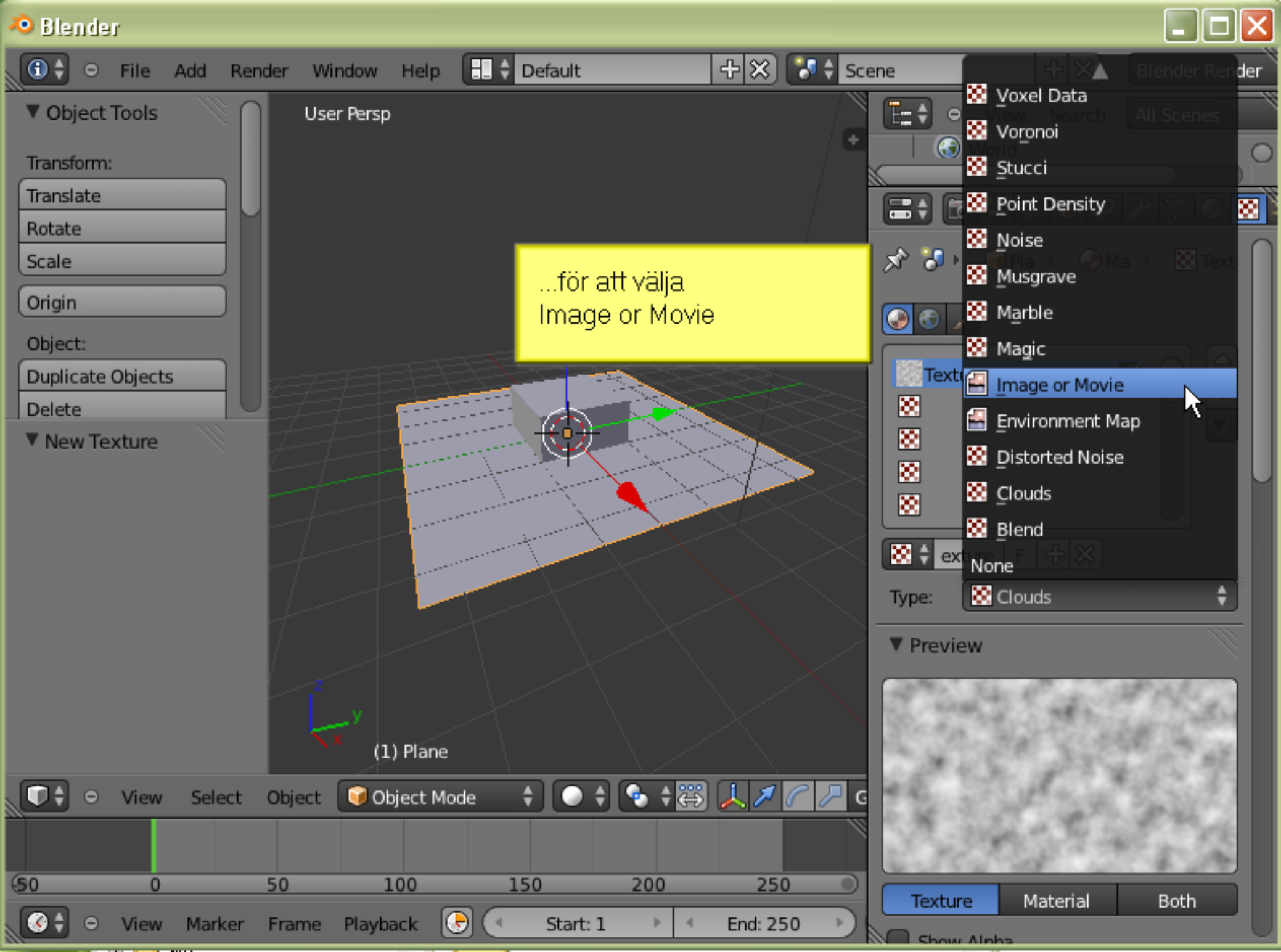
Plan Material.0

New

Gå till fliken Texture och klicka knappen New

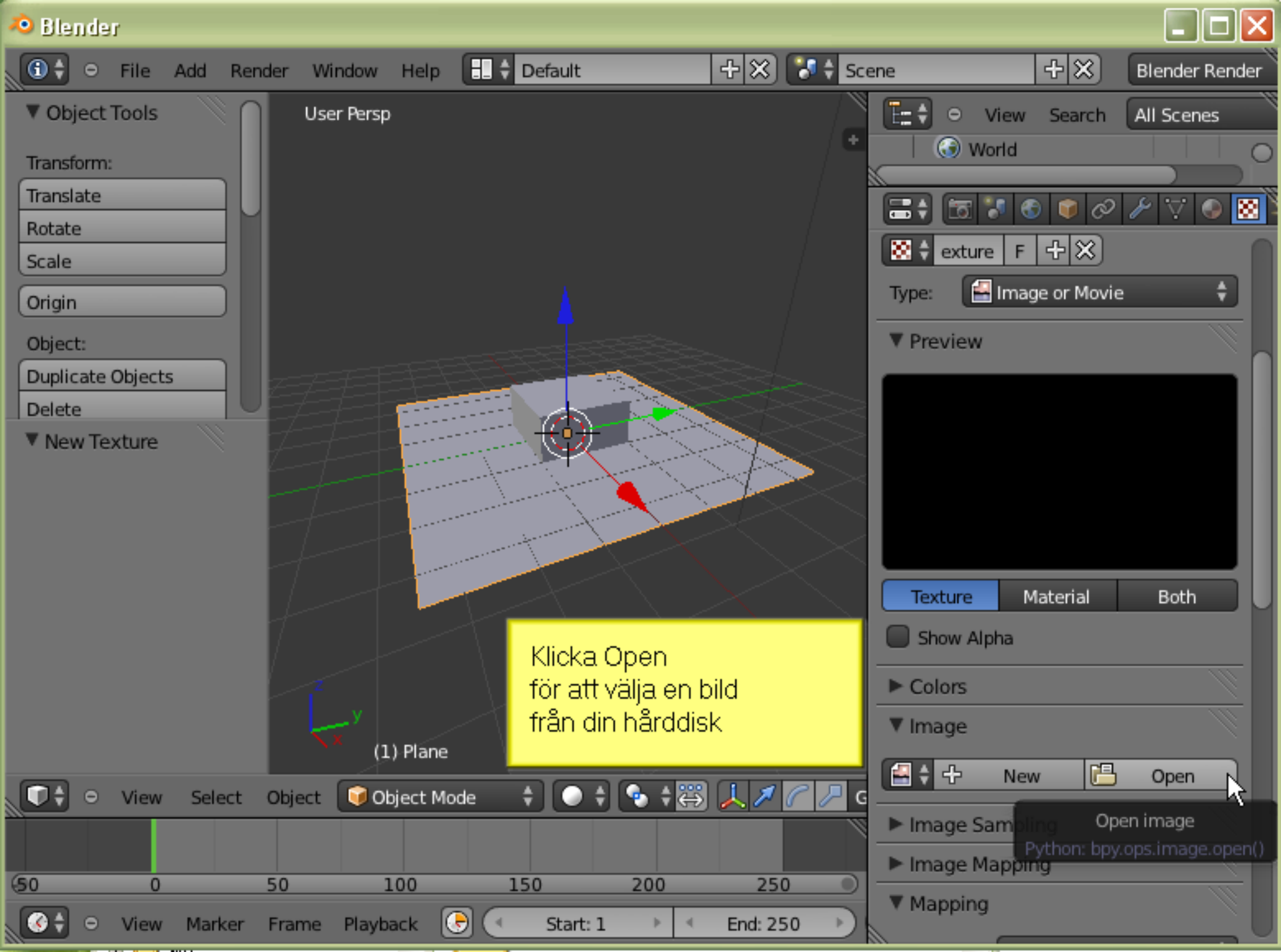






...för att välja  
Image or Movie

- Voxel Data
- Voronoi
- Stucci
- Point Density
- Noise
- Musgrave
- Marble
- Magic
- Image or Movie
- Environment Map
- Distorted Noise
- Clouds
- Blend
- None
- Clouds



▼ Object Tools

Transform:

Translate

Rotate

Scale

Origin

Object:

Duplicate Objects

Delete

▼ New Texture

User Persp

View Search All Scenes

World

texture F

Type: Image or Movie

▼ Preview

Texture Material Both

Show Alpha

Colors

▼ Image

New Open

Image Sampling Open image Python: bpy.ops.image.open()

Image Mapping

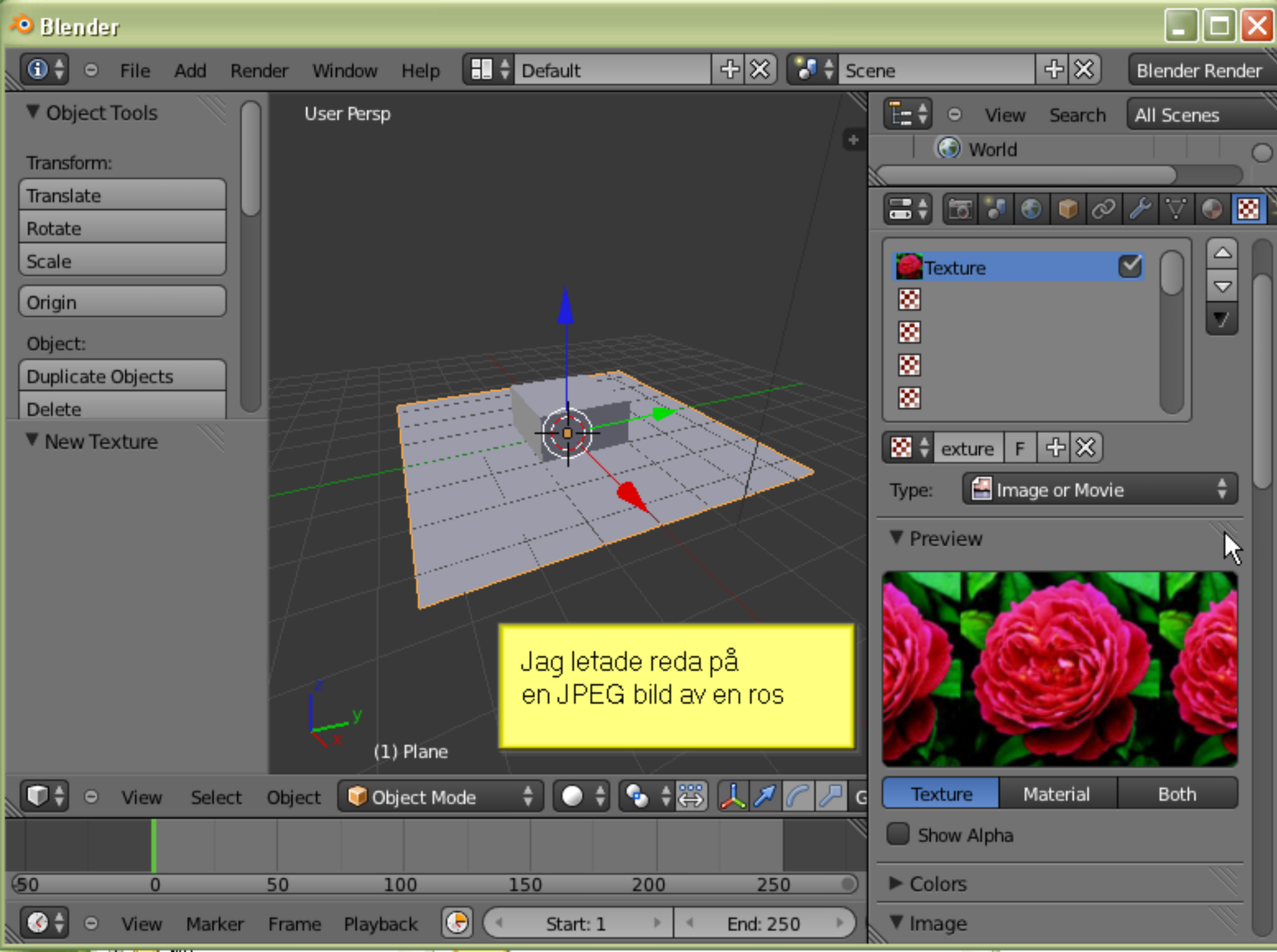
▼ Mapping

Klicka Open  
för att välja en bild  
från din hårddisk

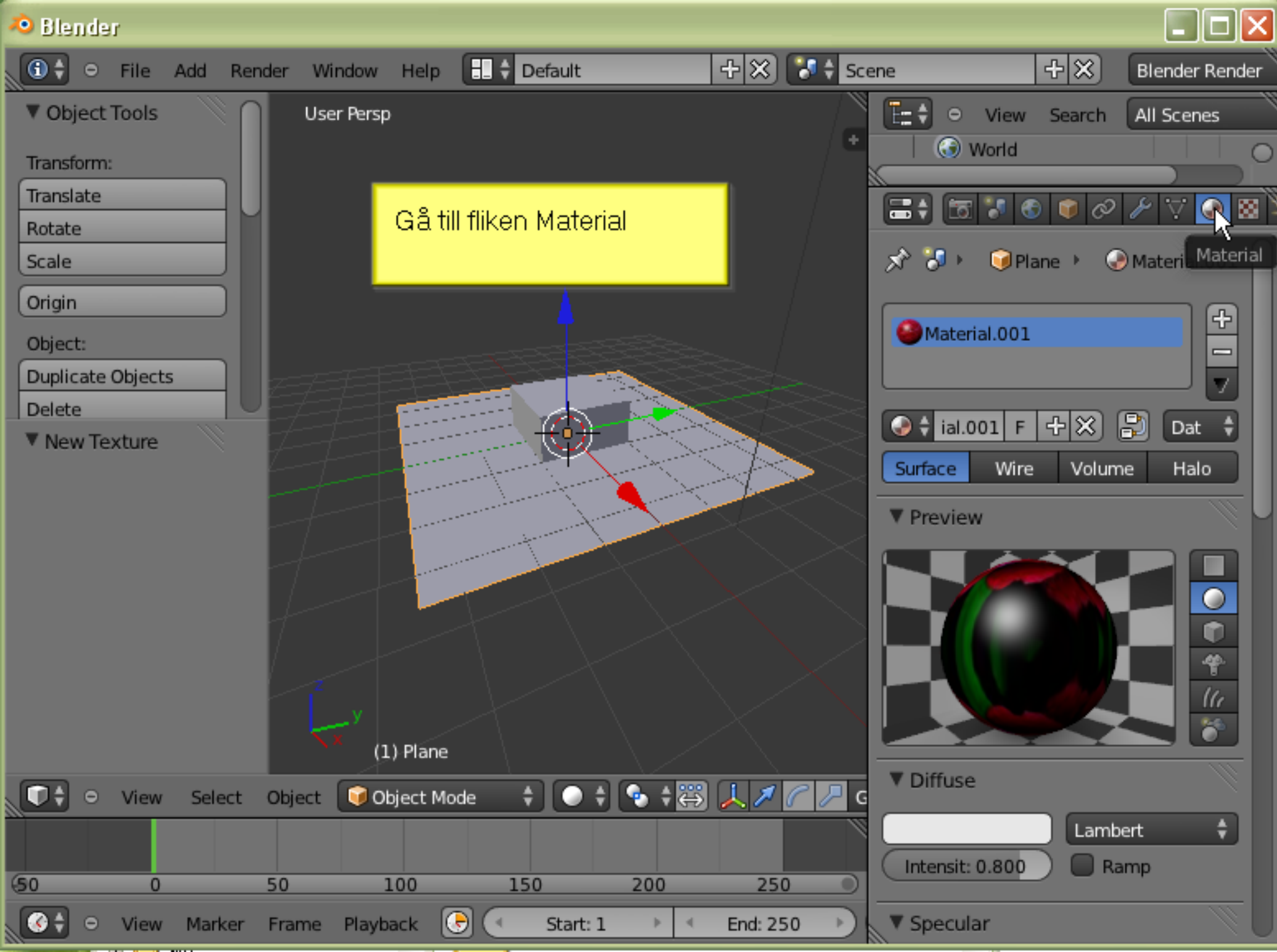
View Select Object Object Mode

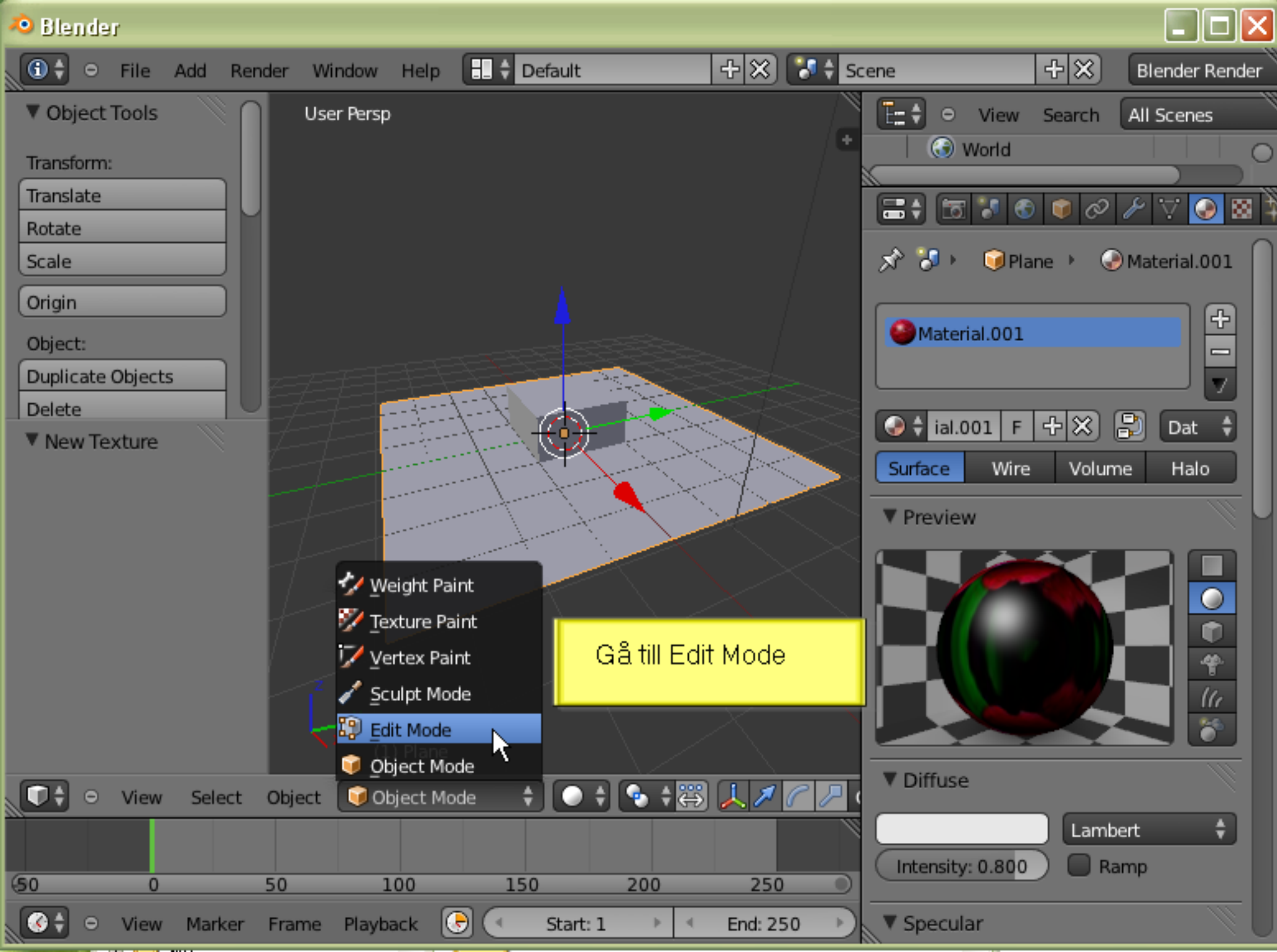
50 0 50 100 150 200 250

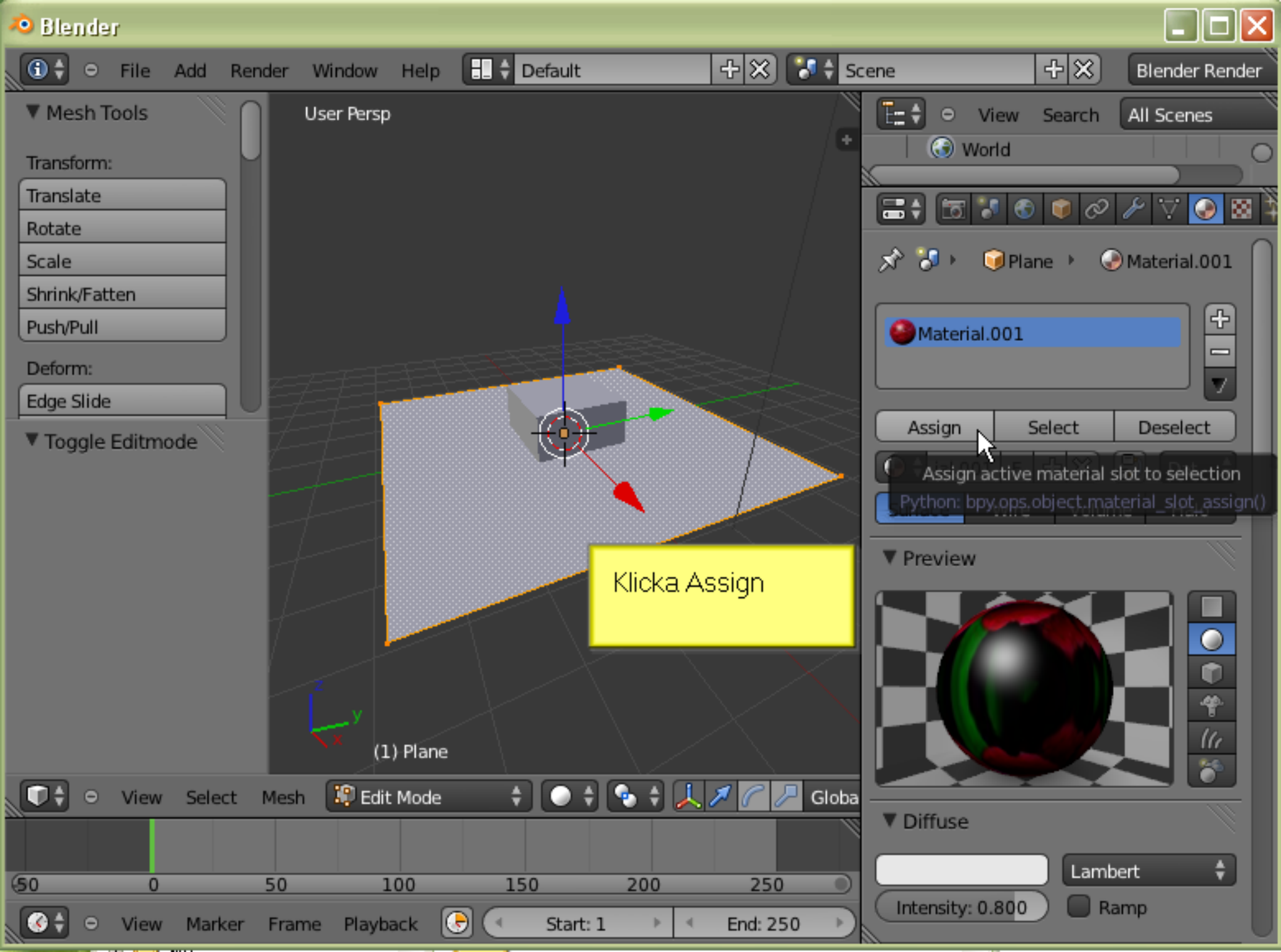
View Marker Frame Playback Start: 1 End: 250



Jag letade reda på  
en JPEG bild av en ros







## ▼ Mesh Tools

Transform:

Translate

Rotate

Scale

Shrink/Fatten

Push/Pull

Deform:

Edge Slide

## ▼ Toggle Editmode

User Persp

View

Search

All Scenes

World

Pin

Material

Plane

Material.001

Assign

Select

Deselect

Material.001

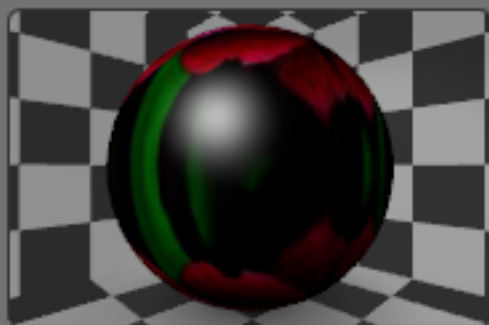
Assign

Select

Deselect

Assign active material slot to selection  
Python: bpy.ops.object.material\_slot\_assign()

## ▼ Preview



## ▼ Diffuse

Intensity: 0.800

Lambert

Ramp

View

Select

Mesh

Edit Mode

Global

View

Marker

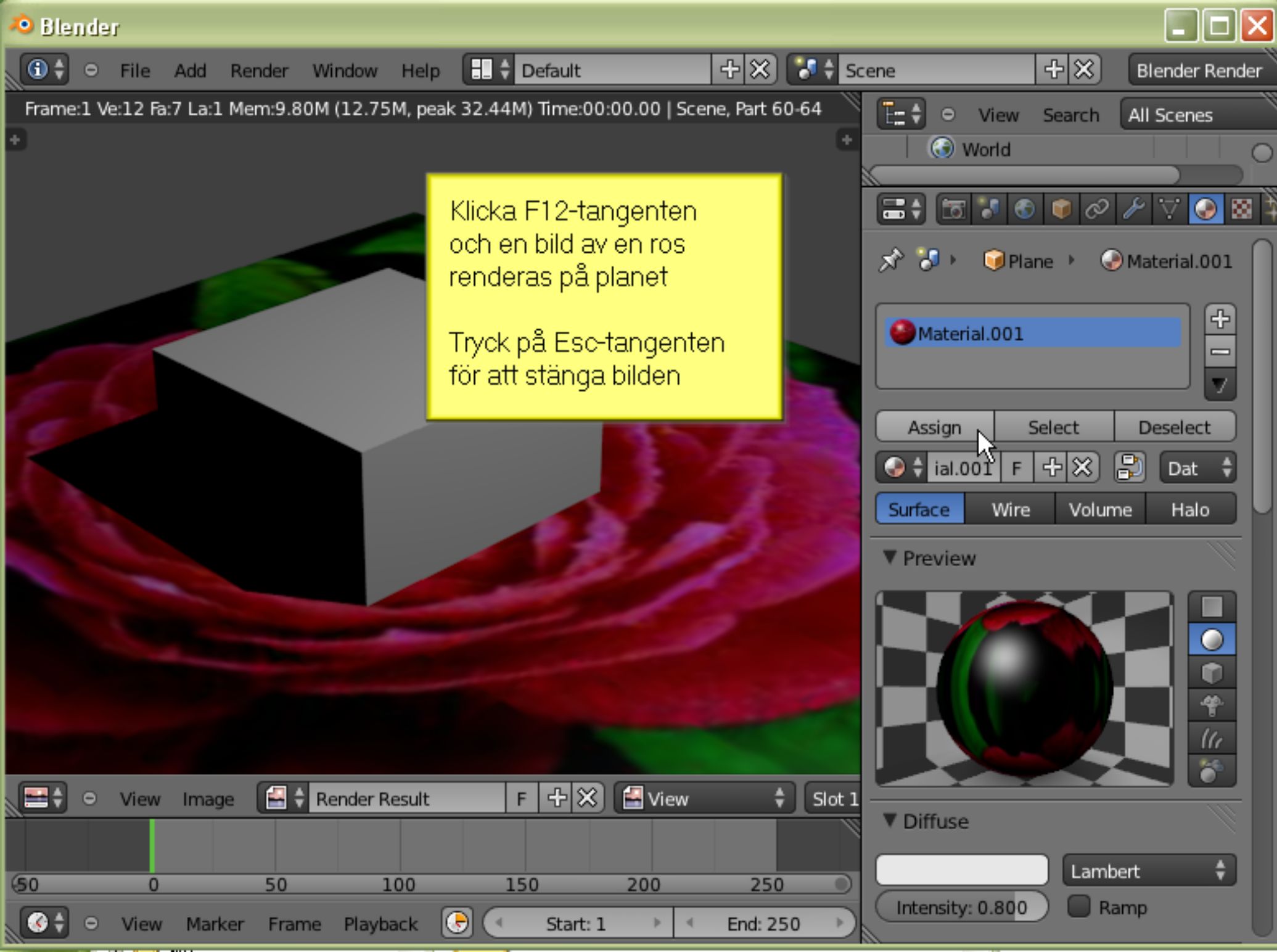
Frame

Playback

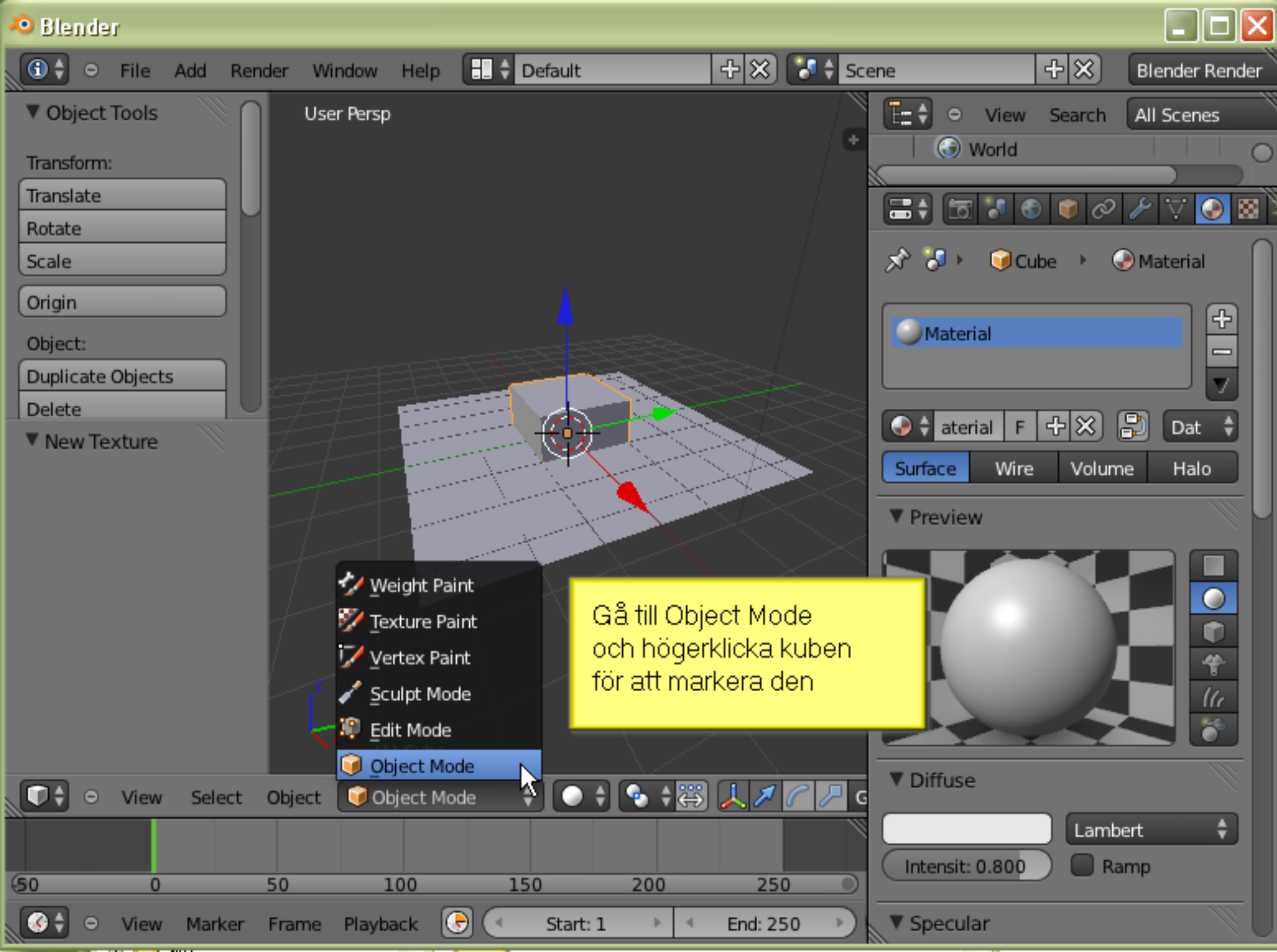
Start: 1

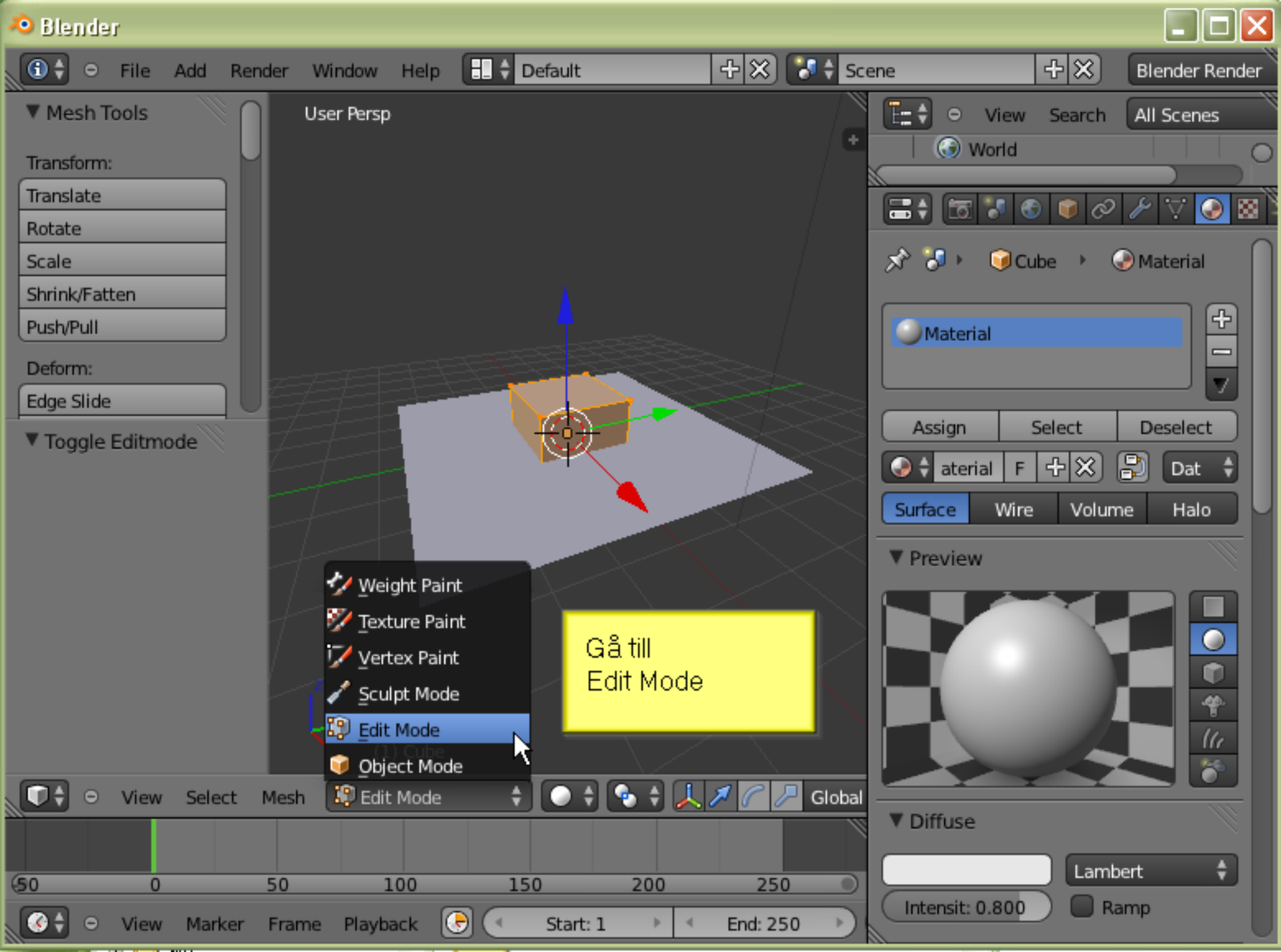
End: 250

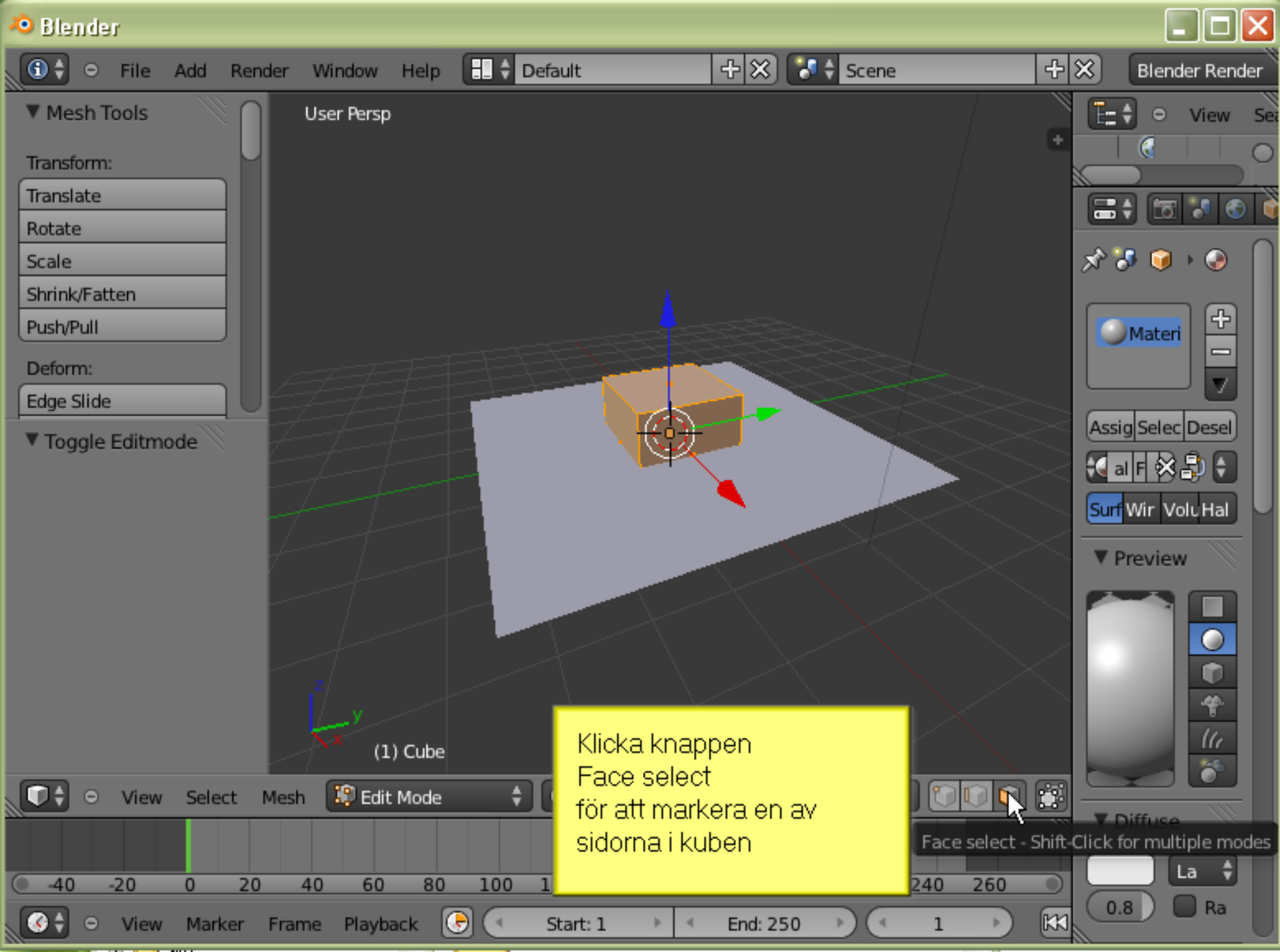


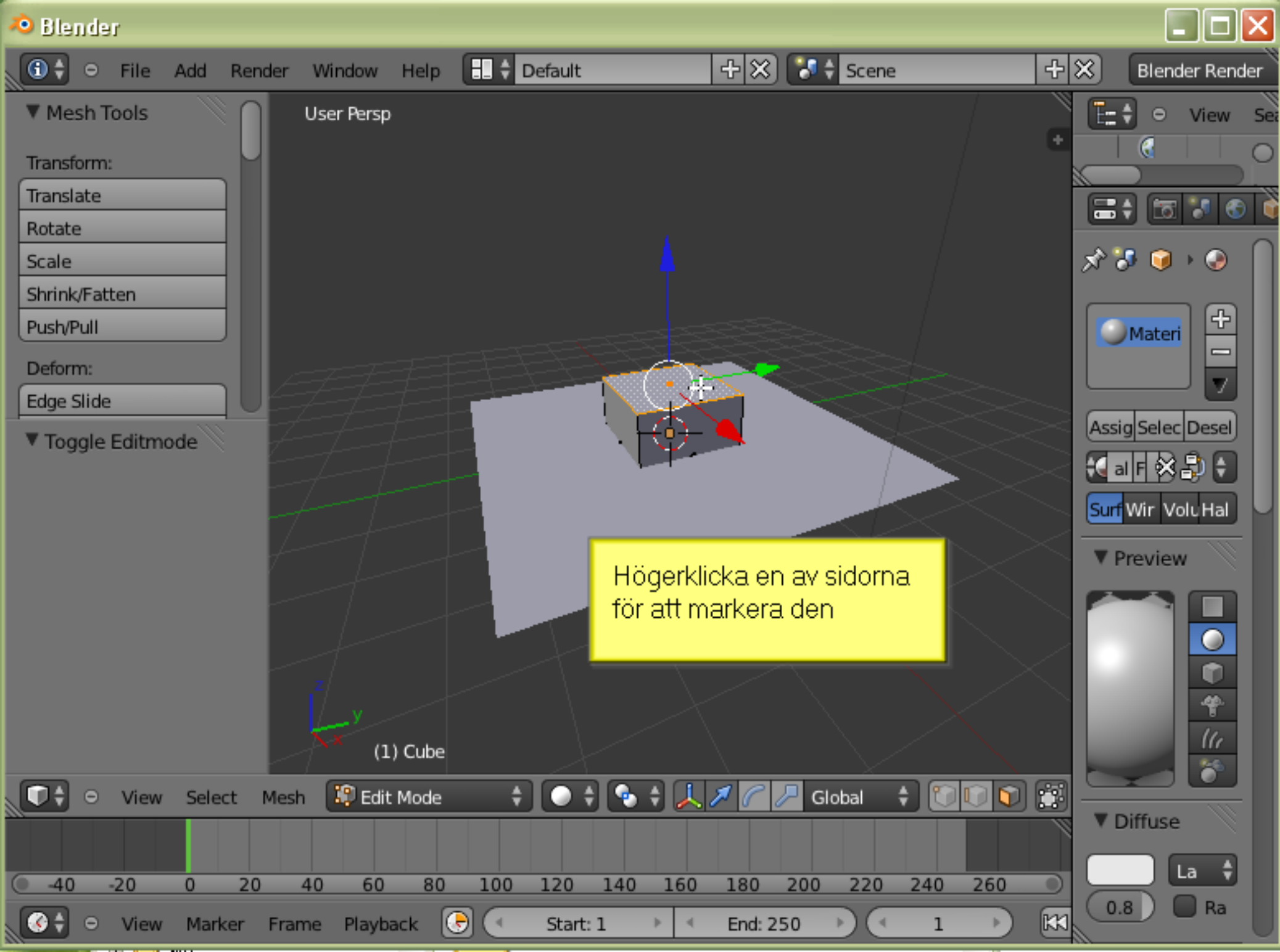


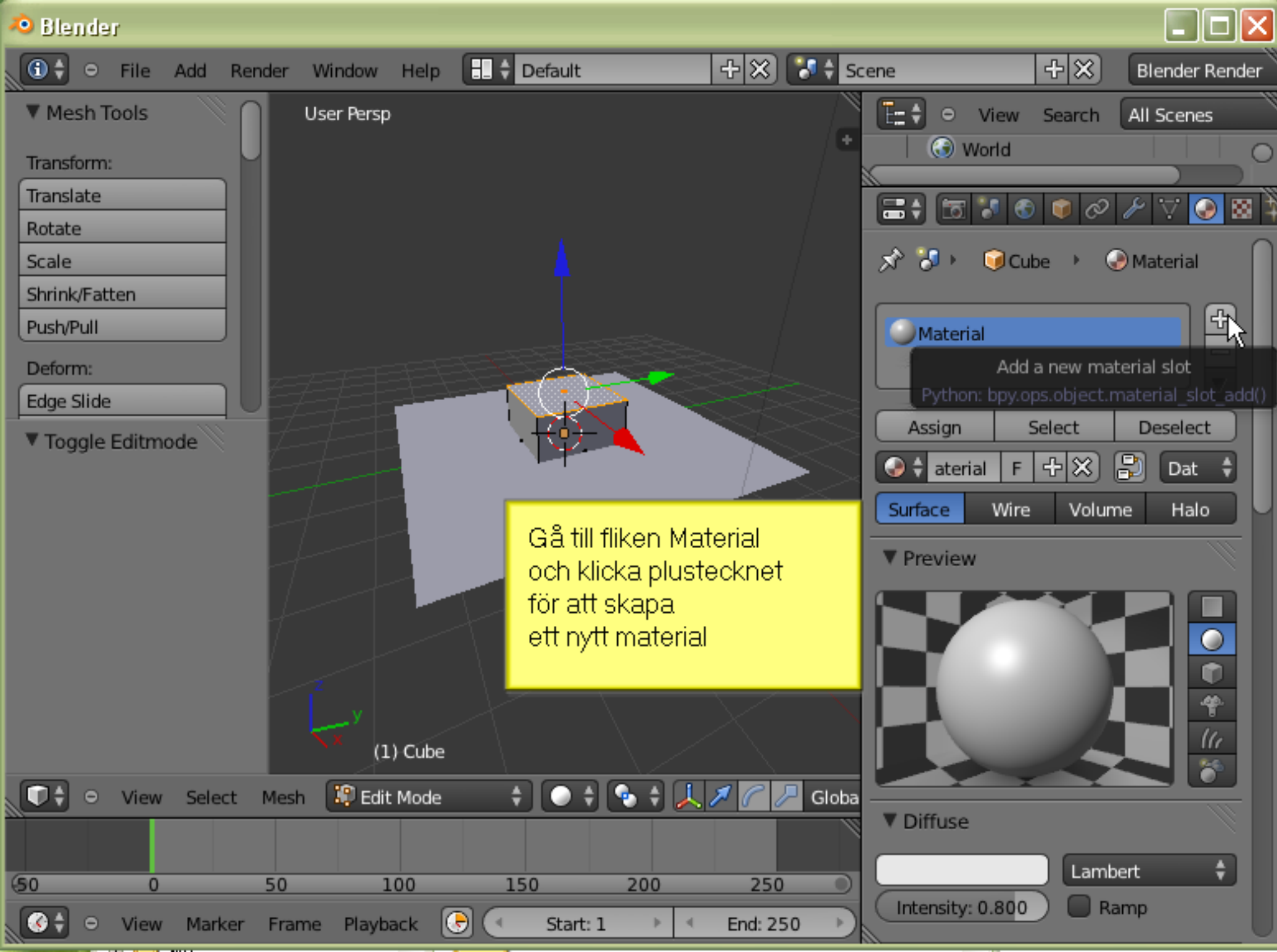


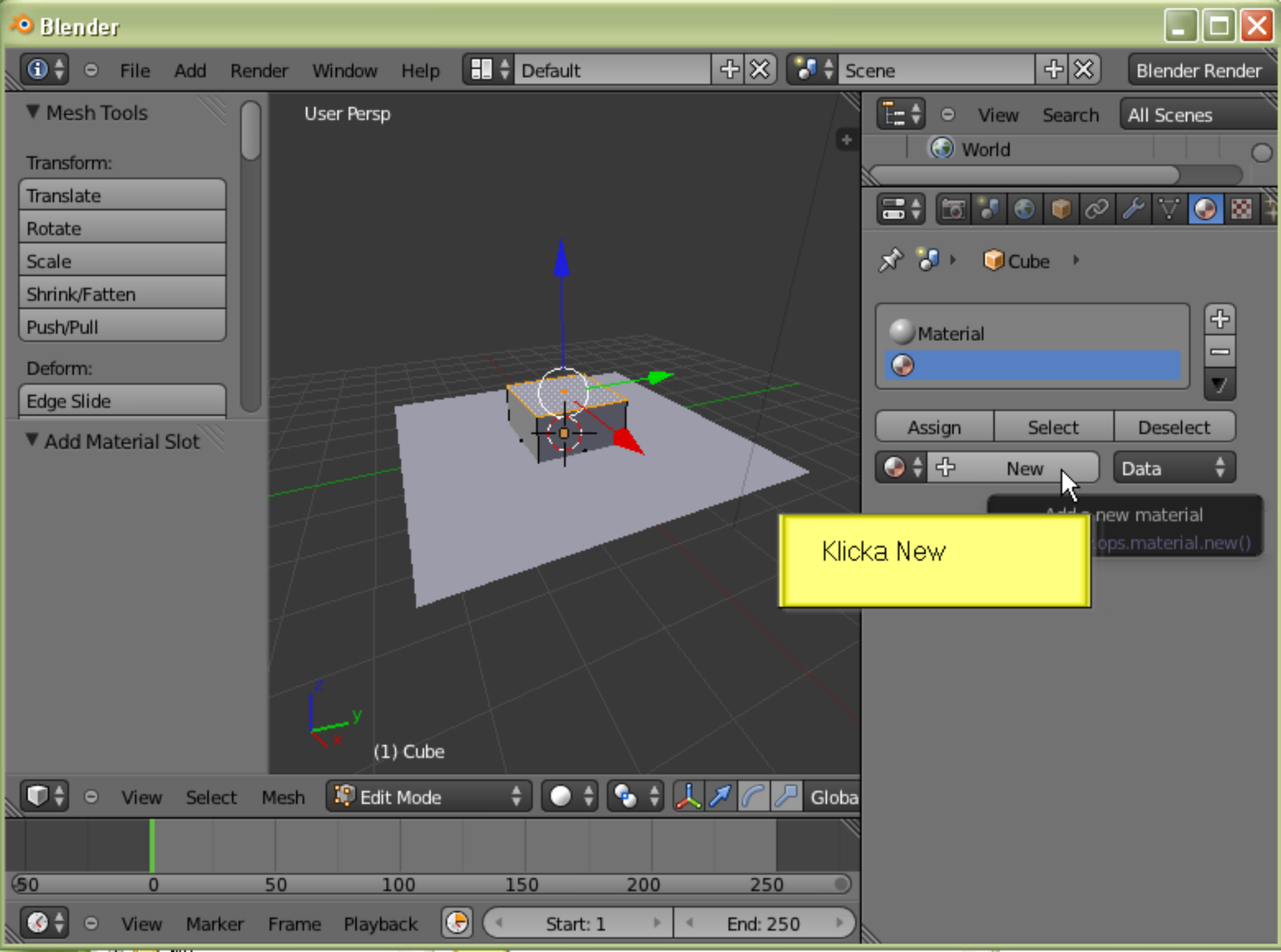
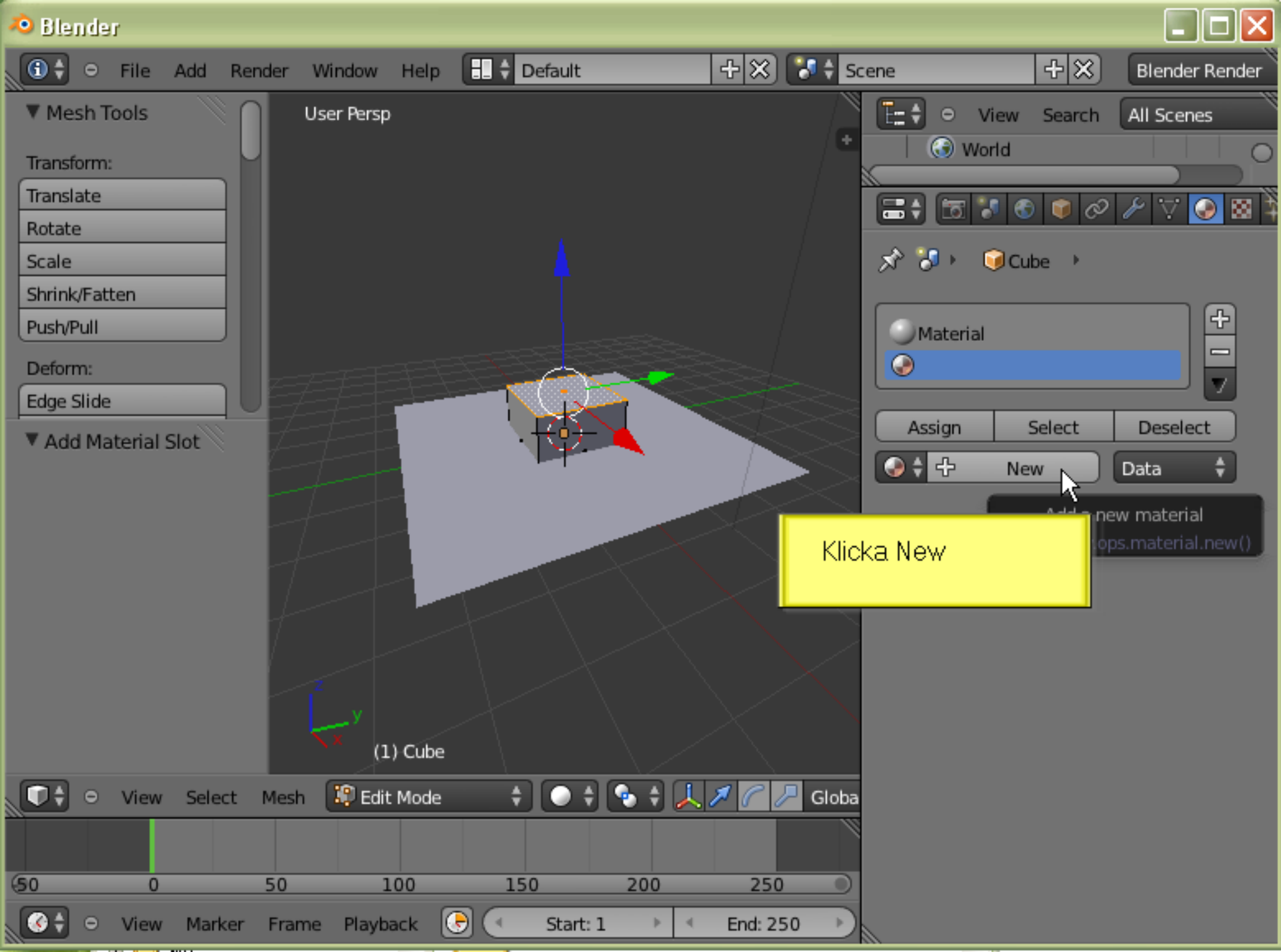


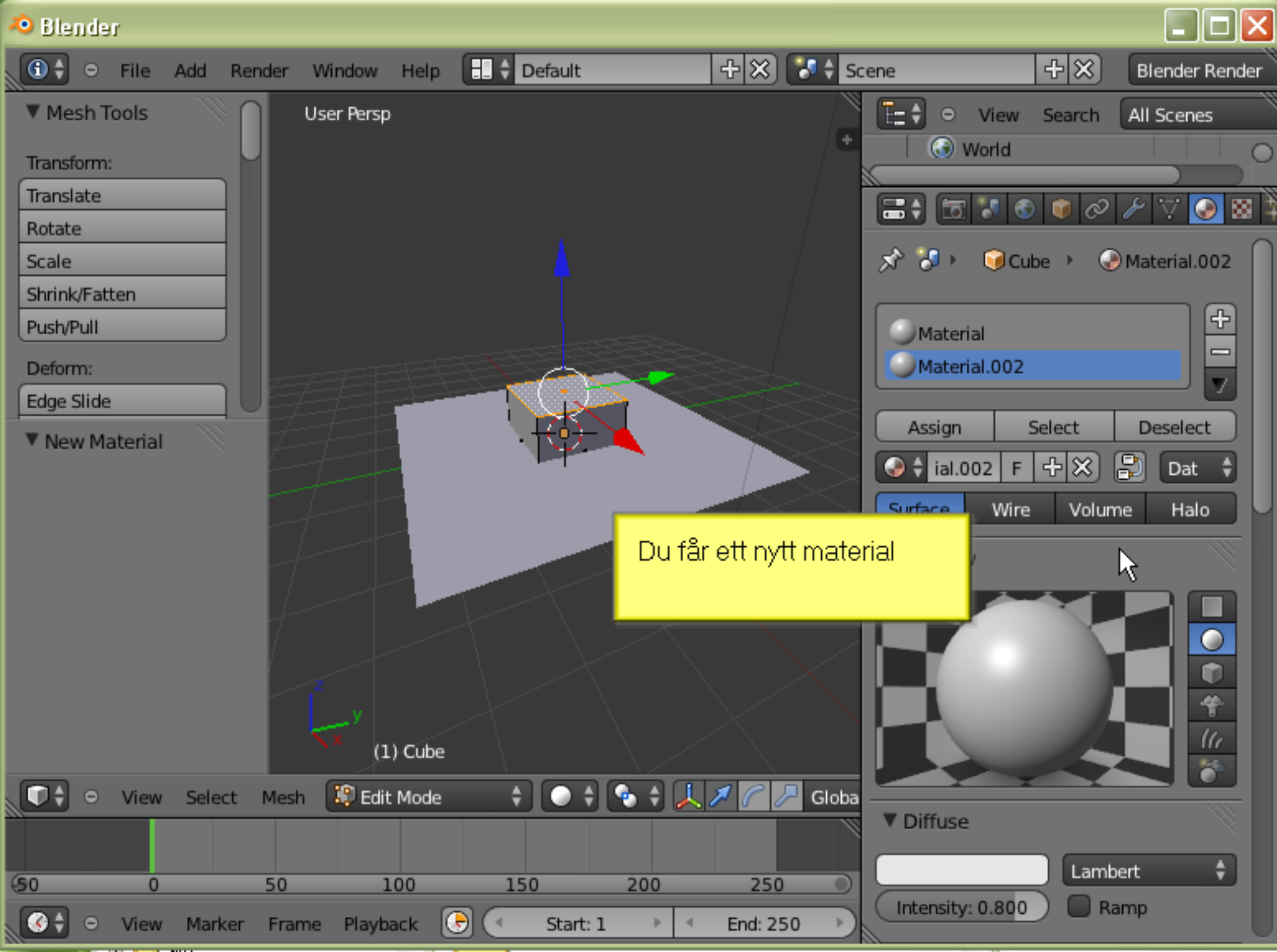




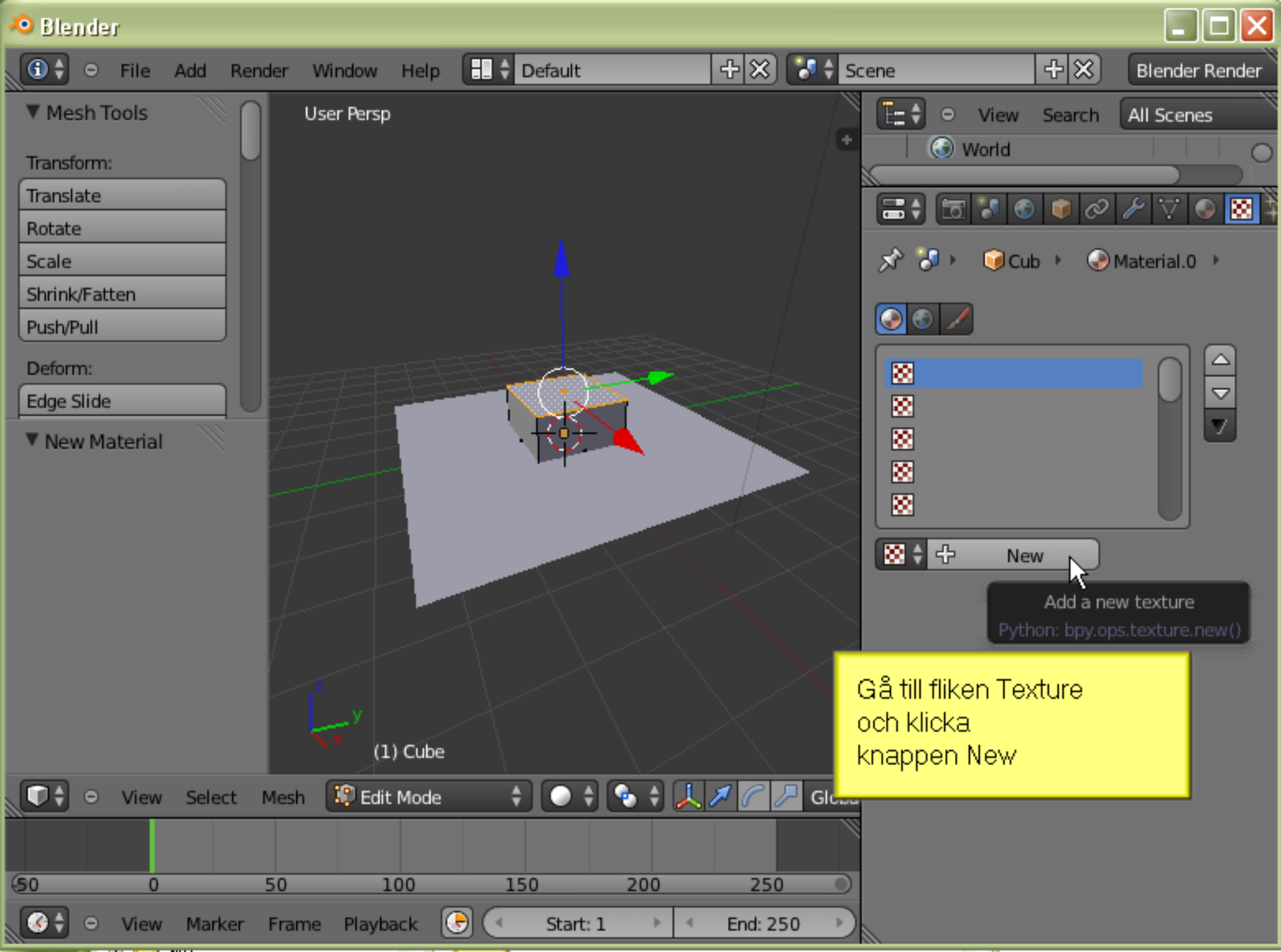












## ▼ Mesh Tools

### Transform:

Translate

Rotate

Scale

Shrink/Fatten

Push/Pull

### Deform:

Edge Slide

## ▼ New Material

User Persp

(1) Cube



View

Search

All Scenes

World



New

Add a new texture

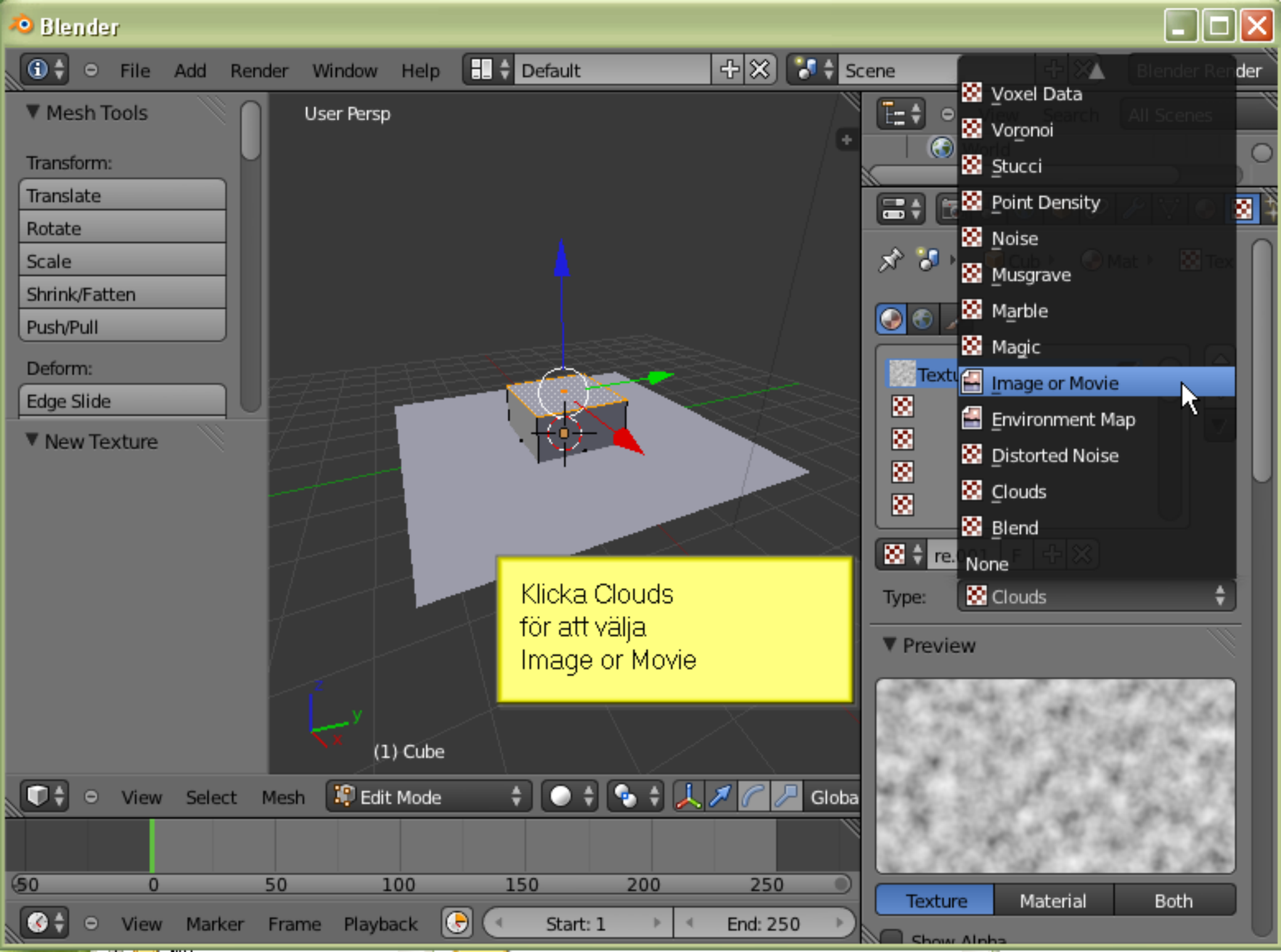
Python: bpy.ops.texture.new()

Gå till fliken Texture  
och klicka  
knappen New



Start: 1

End: 250



Mesh Tools

Transform:

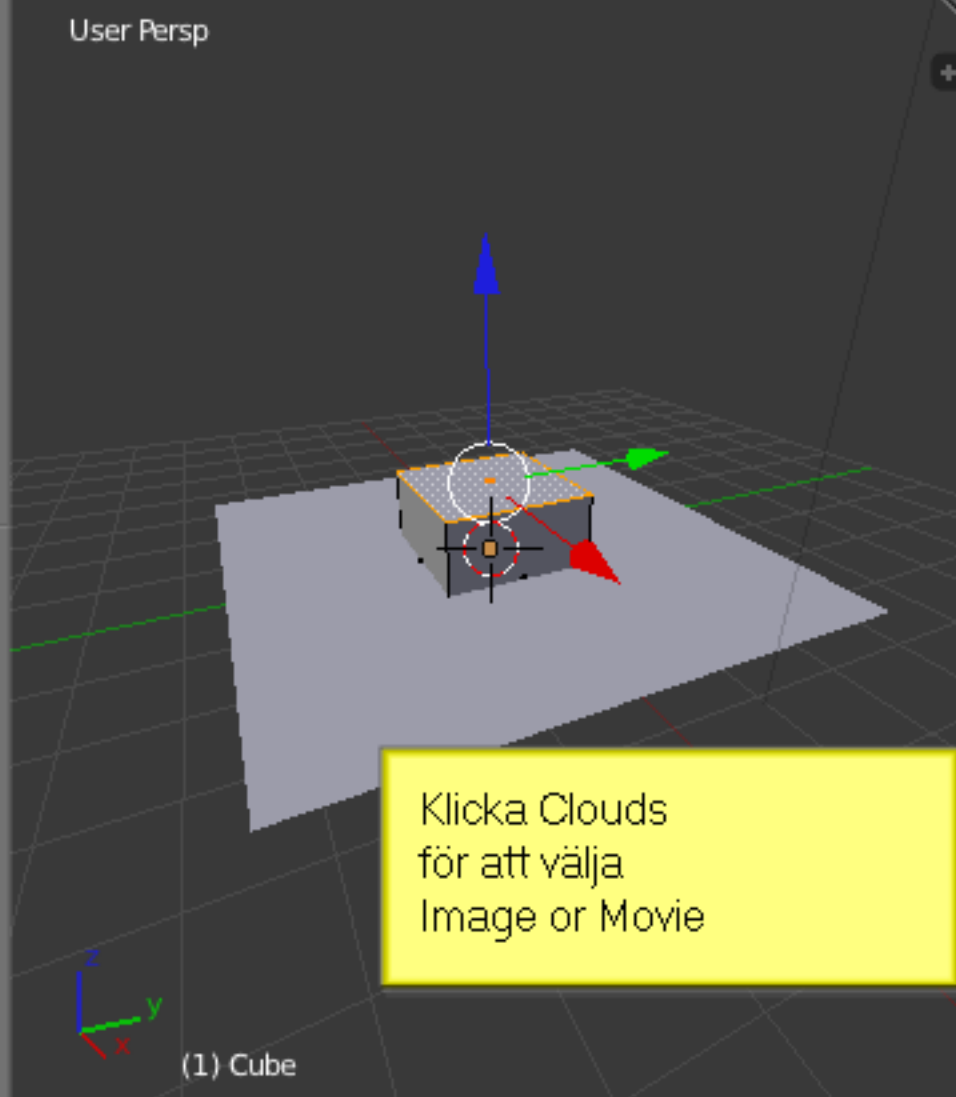
- Translate
- Rotate
- Scale
- Shrink/Fatten
- Push/Pull

Deform:

- Edge Slide

New Texture

User Persp



Klicka Clouds  
för att välja  
Image or Movie

Textures

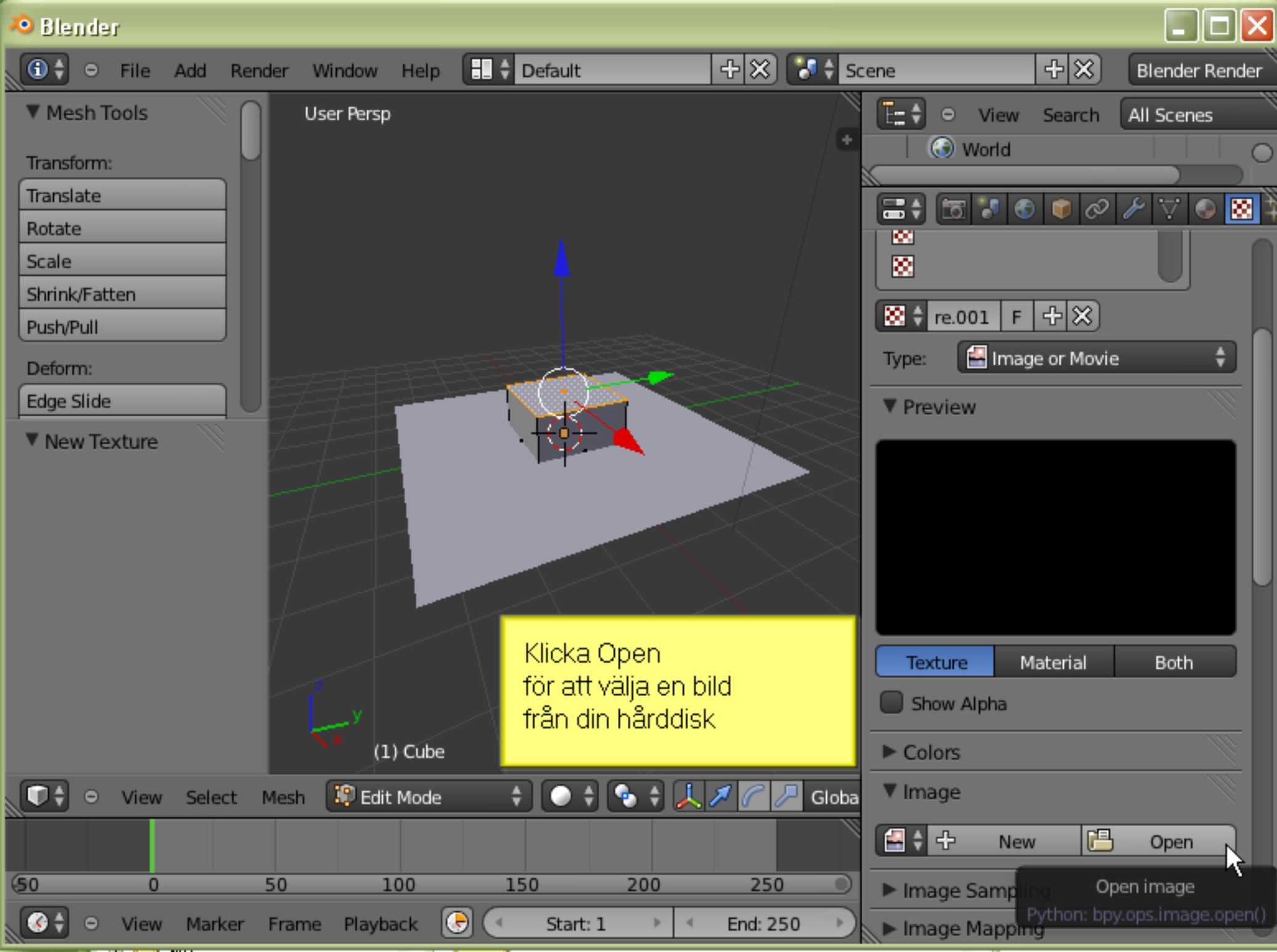
- Voxel Data
- Voronoi
- Stucci
- Point Density
- Noise
- Musgrave
- Marble
- Magic
- Image or Movie**
- Environment Map
- Distorted Noise
- Clouds
- Blend
- None
- Clouds

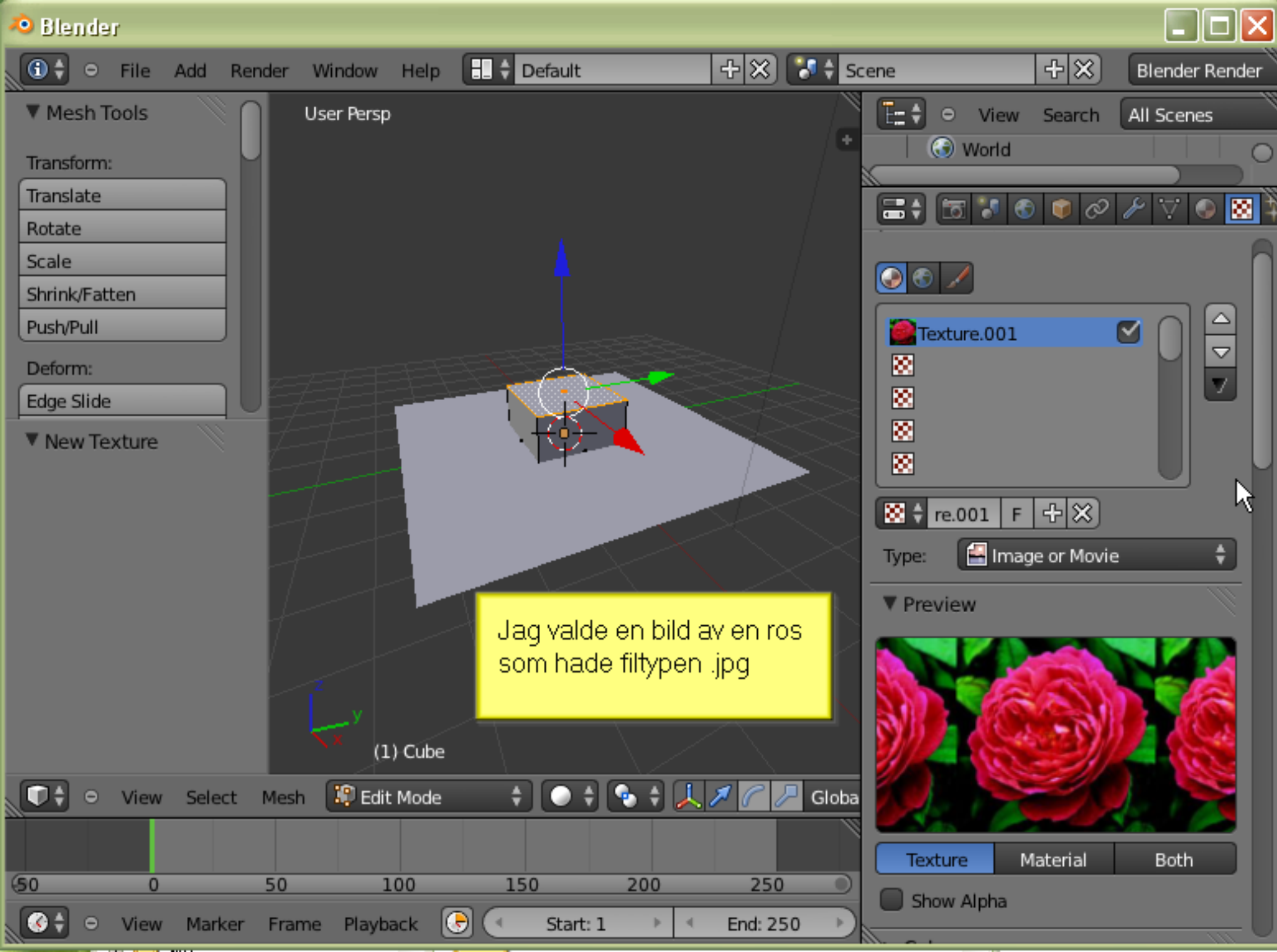
Type:

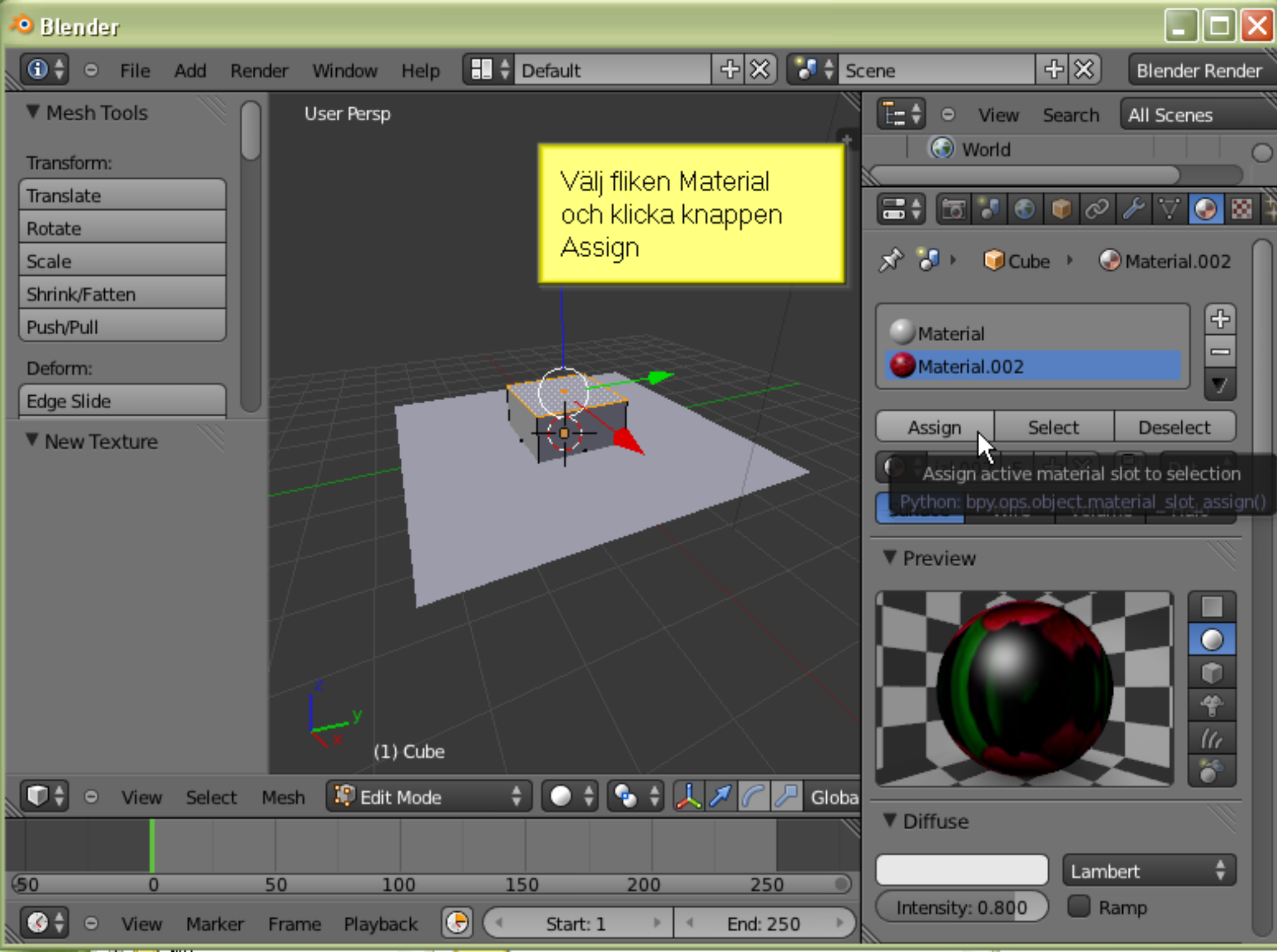
Preview

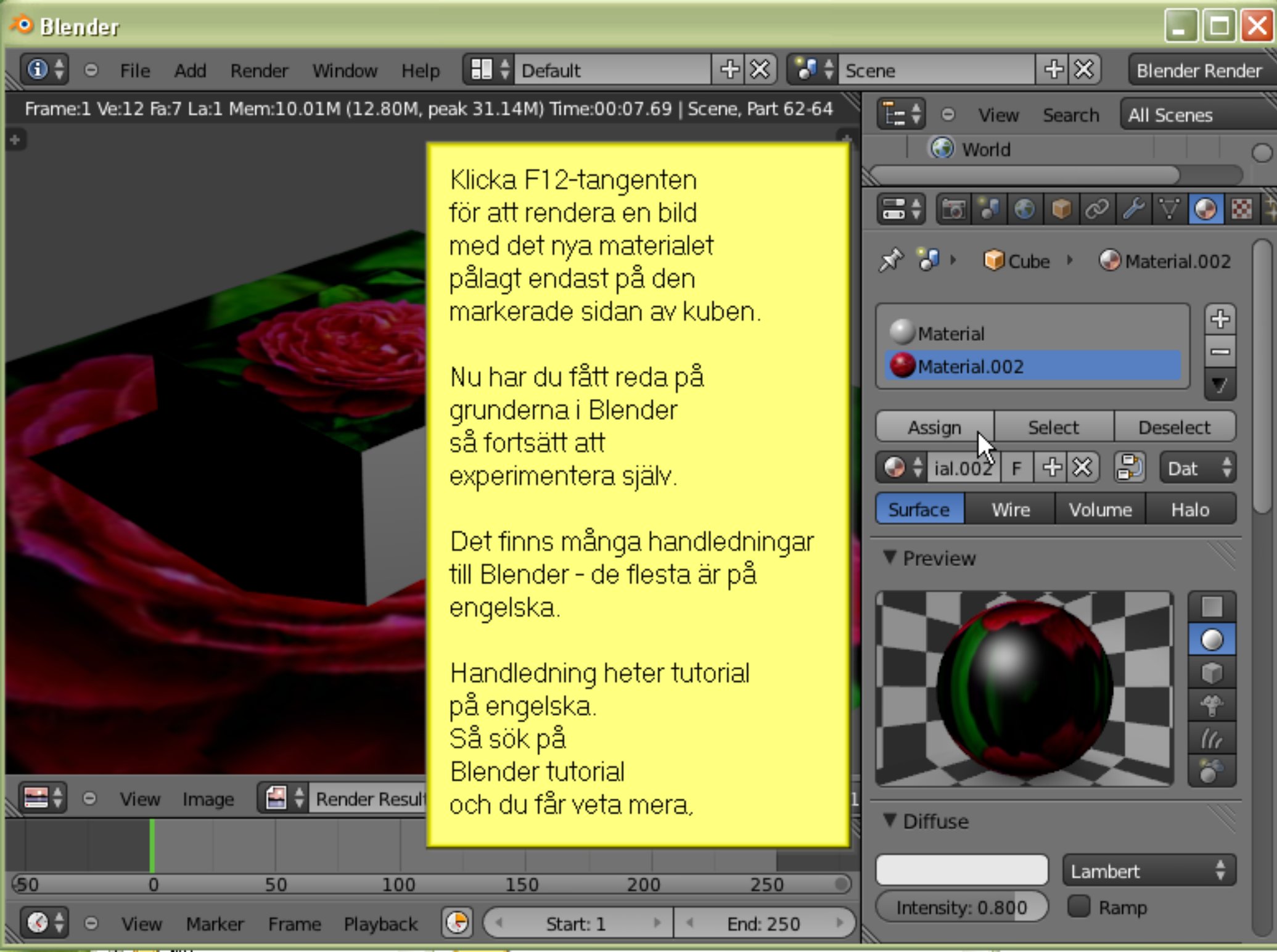


- Texture
- Material
- Both









Klicka F12-tangenten  
för att rendera en bild  
med det nya materialet  
pålagt endast på den  
markerade sidan av kuben.

Nu har du fått reda på  
grunderna i Blender  
så fortsatt att  
experimentera själv.

Det finns många handledningar  
till Blender - de flesta är på  
engelska.

Handledning heter tutorial  
på engelska.  
Så sök på  
Blender tutorial  
och du får veta mera.